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Fortnightly
Review

Expansion

THE first hearing by the Civil Aeronautics Authority on new routes applied for since the creation of this agency last August will have been underway by the time this issue reaches its readers. Thus the curtains are drawn apart before a new stage in the progressive development of air transportation in the United States. Air transport expansion is complicated by various challenging problems. Scores of communities have been appealing to Washington for air mail service. Both existing and prospective airline operators have filed applications for thousands of miles of new routes, most of them in the central and southern areas of the country. Yet there is no single agency in Washington which can, by itself, launch new air routes. Expansion will have to come through teamwork by the Civil Aeronautics Authority, by the Post Office Department, by Congress—and by the aviation public demanding the service.

To the CAA falls the task of hearing applications, of culling the good routes from the bad, of deciding which operator is most able to perform the service. But no airline route today is an economically sound enterprise without air mail and, as a matter of fact, no airline is adequately serving the public unless it carries mail as well as passengers and express.

Thus the Post Office Department comes into the expansion program strongly, for every application filed with the CAA for a route certificate includes also a request for carrying air mail. It just so happens, regardless of the opinions of a few, that the Post Office Department is

Airline Expansion Likely in 1940 as CAA Begins Hearings

DOUGLAS CO. GETS \$15,000,000 AWARD

War Dept. Also Announces \$500,000 Bomber Contracts for Martin and Stearman

Award to Douglas Aircraft Co. of Santa Monica, Cal., in the amount of approximately \$15,000,000 for the production of a new design attack bomber, and awards to Glenn L. Martin Co., Baltimore, and Stearman Aircraft Co., Wichita, Kan., for production of attack bombers in the amount of approximately \$500,000 each was announced by the War Dept. on May 20.

Douglas contract price includes spares, but does not include cost of engines, props, armament, radio equipment, etc., furnished by the government. Ship is an all-metal monoplane powered with "the large Wright Cyclone with supercharger." Some will be equipped with Hamilton Standard props and some with Curtiss Electric. Additional equipment includes flaps or air brakes, retractable landing gear, radio and "all the modern aids to safety and efficient flying," the statement said. The Douglas designation for the plane is DB-7, but the Air Corps number has

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Favors Expansion



W. W. Howes

First Assistant Postmaster General who is the key figure in airline expansion by virtue of his control of the air mail.

World's Largest Air-Cooled Aircraft Engine, 2000 H.P., Announced by Army

The Army Air Corps officially announced on May 15 the development of the world's largest air-cooled aircraft engine by the Wright Aeronautical Corp. of Paterson, N. J., with the assistance of the Air Corps. Word previously had been released that the new model 31 Consolidated flying boat was equipped with two of these engines.

Known as the Duplex Cyclone, the new engine is a double-row, air-cooled radial, with its 18 cylinders arranged in two rows of nine cylinders each. Rated at 2,000 hp., it is 500 hp. more powerful than the 1,500 hp. Double-

row Cyclone 14 which has the highest power rating ever accorded an American-built air-cooled radial engine.

The Duplex-Cyclone has been under development for the last two years and is being displayed to the general public for the first time in the Air Corps exhibit in the aviation building at the New York World's Fair.

First commercial application of the engine has been made in the Consolidated flying boat which was test flown during the week of May 8 at San Diego.

P. O. Must Get Funds Before Authorization of Mail; This Means January at Earliest

WITH half of the airline certificates of convenience and necessity issued and with most of the hearings concluded on applications for mail pay increases, the Civil Aeronautics Authority is now turning to the long-awaited expansion program. Applications for four new airline routes will be heard during June with more new route hearings to be scheduled during the summer.

Forty-eight applications by 24 different air carriers, seven of which have not heretofore operated an airline, are on file for approximately 15,500 miles of new routes. The existing scheduled airline system comprises about 35,000 route miles.

Two hearings to be held involve sharp contests between one or more existing airlines. The hearings and dates are:

May 31: NATIONAL AIRLINES INC. and EASTERN AIR LINES INC. for new routes in Florida. NATIONAL seeks Jacksonville to Lakeland via Gainesville and Ocala, and another line from Daytona Beach to Jacksonville to connect its two existing routes. EASTERN seeks a route between Jacksonville and Miami via Tampa, criss-crossing the state, and a second route from Tallahassee to Orlando via Ocala. EASTERN seeks direct New York and Chicago routes to both coasts of Florida.

June 5: NORTHWEST AIRLINES, for routes between Milwaukee and the Twin Cities via Fond du Lac, Oshkosh, Green Bay, Wausau, Superior and Duluth; and a route from Milwaukee to Marquette via Fond du Lac, Appleton, Green Bay, Marinette, Menominee and Escanaba.

June 12: MID-CONTINENT AIRLINES, NORTHWEST AIRLINES and BRANIFF AIRWAYS for routes between the Twin Cities and Kansas City and St. Louis. MID-CONTINENT has applied for Minneapolis-Kansas City via Mason City and Des Moines, and Des Moines to St. Louis. NORTHWEST AIRLINES seeks a route from Rochester, Minn. to St. Louis via Mason City, Des Moines, Ottumwa, Ia., and Quincy, Ill. BRANIFF AIRWAYS has applied for Minneapolis-Kansas City via Rochester and Des Moines. This hearing doubtless will be prolonged because of

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Second Anniversary Issue

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SOUTHWEST SENDS PROTESTS TO HOWES

Conference Asks Official to Rescind Order Stopping Postmasters from Promoting New Routes

The Southwest Aviation Conference, through its secretary, Clarence R. Mooney, has dispatched to First Assistant Postmaster W. W. Howes the letter authorized at the March conference in Fort Worth protesting against his order to postmasters that they must cease promotional efforts for new air routes.

"This is an unchain letter," the statement said. "We respectfully ask that you unchain the postmasters so they can remain active as home community boosters for modern mail service—by air transportation.

"We are weary of speeches, but we still believe in freedom of speech, for postmasters as well as anyone else. Particularly they ought to have the right of freedom of speech on the subject of airmail expansion, which has been denied them by your letter suggesting that they cease any promotional efforts to obtain airmail service for their home communities. All citizens are guaranteed the right to petition Congress on any subject, and Postmasters, by reason of their employment, ought not be denied that right.

In conclusion the letter said:

"We submit that the Post Office Department has been one of the strongest friends of airmail development. We urgently request that you declare the Department's attitude publicly in such terms that there can be no misinterpretation construed as to the Department's

CAPT. TOWERS HONORED Grover Loening Gives Dinner For Atlantic Squadron Officers and Leaders

A dinner in honor of Capt. John H. Towers, newly appointed chief of the Navy bureau of aeronautics, was given May 12 by Grover Loening for a group of aviation officers of the Atlantic squadron and a number of New Yorkers at the Racquet and Tennis Club. Atlantic squadron officers included Capt. J. S. McCain, commanding officer, USS Ranger; Comdr. O. B. Hardison; Comdr. H. S. Kendall; Lt. Comdr. M. T. Seligman; Lt. Comdr. E. W. Litch, USS Ranger; Comdr. G. D. Murray, commanding officer, USS Langley; Comdr. S. P. Ginder; Lt. Comdr. A. Gavin and Lt. Comdr. L. C. Ramsey, USS Langley.

Other guests were Glenn L. Martin, Leroy H. Grumman, Artemus Gates, William A. M. Burden, Maj. Lester D. Gardner, Cole J. Younger, Arthur W. McCain, William Barclay Harding, Robert G. Payne, Thomas A. Hitchcock Jr., Capt. Holden C. Richardson, Dr. Jerome C. Hunsaker and Lt. Comdr. David Rittenhouse.

attitude of friendly enthusiasm for the improvement of our air mail services by air. We very highly value the forward-looking and well informed leadership which the postmasters have accorded airmail developmental programs, and hope that the Post Office Department's attitude may be clarified in such way that these good men and women may once more feel free to participate in our support for wide extension of airmail service."

Mooney is aviation secretary of the Kansas City (Mo.) Chamber of Commerce. President of the Southwest conference is Moss Patterson of Oklahoma City.

Navy Air Chief



Capt. John H. Towers, new chief of Navy's Bureau of Aeronautics.

Pittsburgh Field Loses

Pittsburgh, May 15 — Allegheny County Municipal Airport had total expenditures last year of \$98,854 with an income of \$72,013, making a deficit of \$26,841. Leases on the \$6,000,000 field were renewed by TWA, which paid \$28,531 last year to the county; Todd School of Aviation, which paid \$417, and James I. Filee, airport barber, who paid \$69.90. PCA's lease, which added \$29,167 to the county's income in 1938, is not up for renewal until fall.

BOSTON'S 1938 FIGURES Field Has a Deficit of \$38,200 and Expects to See it Increase Annually

Boston, May 15—From leases to operators on Boston Airport, the field received \$11,800 in 1938, while the operators did a gross estimated business of \$3,000,000, according to a report from a special recess commission. Boston spent \$50,000 for operation of the airport, leaving a deficit of \$38,200, and "every indication points to this deficit increasing yearly." Rental charges on a basis of three percent of gross business income were suggested by the commission.

Total passengers in 1938 were 49,819 incoming and 50,178 outgoing, a total of 100,027. There were 7,256 incoming transient passengers and 7,144 outgoing, totaling 14,400. Of the two branches there were 144,427 passengers—57,105 incoming and 57,322 outgoing.

"A conservative estimate of the average passenger fare paid is taken as \$15," the commission reported. "This indicates that a gross passenger revenue in excess of \$1,700,000 annually is made possible by the operation of Boston Airport."

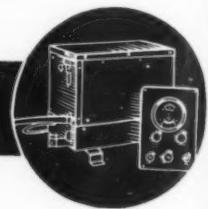
Lowry to Be Expanded

Denver, Colo.—Lowry Field, seat of the Air Corps technical school, will be expanded over a 50-block area north of the present field, it was revealed following a visit of Brig. Gen. A. O. Seaman. Acquisition of the area is necessary immediately, officials said, to allow for construction of temporary barracks to house an increase in students & personnel scheduled to begin soon. It was said that within 15 months Lowry Field would be able to handle 2,900 students and a permanent personnel of 900.

More and more planes each year are equipping with RCA Instruments

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BOUNDED Feb 3 1941
9-Year-Old French

Boat Flies Atlantic

Air France Transatlantique's nine-year-old flying boat, the *Lieutenant de Vaisseau Paris*, landed at Port Washington, L. I., on May 18, completing an experimental trip from Biscarrosse that started on May 16. Still flying after being sunk in a storm and later salvaged, reconditioned and refloated, the boat has been fitted with six new engines, Hispano Suiza 12 Y 37s, of 920 hp., totaling 5,520 hp.

Eight crew members, headed by Capt. Henri Guillaumet, and one passenger, Jacques M. J. C. Vivent, asst. director of civil aviation in France, were aboard the boat. The line's U. S. representative, Marcel Castleman, said the company expected to make 12 round trips this year with the *Lieutenant* and a sister-ship, the *Ville de Saint Pierre*, with one crew, alternating boats. He said Air France plans also to make trans-Atlantic flights with mail in three Farman landplanes this summer if permission is granted.

The *Lieutenant* was described as being nearly as large as the Boeing 314s, but much slower. Air France's two boats will make experimental trips across the north Atlantic by the southern route until the three 66-ton ships are ready. One will be a Latécoère 631 and two will be SE 200s.

CAA Inspectors Take Air Corps Course

Two groups of CAA inspectors have completed a special course on the primary training stages at Randolph Field, Tex., the Air Corps' Training Center, so as to become more familiar with the Army's system of flight training. A third group of six is to begin the two-week course on June 1.

Purpose of the training is to enable CAA inspectors to help private instructors in civil schools as a part of the Air Corps training program. The first CAA class of seven completed the course in April and the second, composed of eight, finished in May.

The eight inspectors who finished recently were Maj. G. A. Wiggs and Lieut. G. M. Jones, Air Reserve; First Lieut. F. H. Longway, National Guard; Capt. E. M. Clarke and Lieuts. Arthur C. Burns and J. O. Christian, Navy; Capt. Robert E. Dako, Coast Guard, and Lieut. J. R. Cram, Marine Corps.

Starting June 1 are E. A. Goff, J. G. Nall, J. T. Shumate, E. S. Hensley, W. B. Davis and R. H. Lees.

Trophy to Lindberghs

Col. and Mrs. Charles A. Lindbergh are recipients of the Adm. William A. Moffet Maritime Aviation Trophy, it was announced May 18 by Mrs. Lily Reed, donor, and founder and sponsor of the National Maritime Memorial Services for the dead of the sea & air. The trophy was presented on May 22.

Gariepy With USAC

A. J. Gariepy, former district sales manager in New York for American Airlines, is now in charge of airtravel and airinsurance for United States Aviation Underwriters, New York City.

Inspectors to Be Added

Thirteen new aircraft airworthiness inspectors and 10 general field inspectors will be added to the CAA shortly, it is learned. The additions are being made to relieve serious jams in certain regions. The Kansas City and Santa Monica aircraft airworthiness offices are two months behind in work and several regions are short of field inspectors. Lack of funds has prevented appointment of inspectors before.

American Aviation for June 1, 1941

Calendar

- June 3-4-9th Annual National Air Carnival, Birmingham, Ala.
- June 7-8-Technical Conference On Airport Construction, University of Michigan, Ann Arbor.
- June 8-9-10-Oklahoma Air Tour.
- June 8-11-SAE World Automotive Engineering Congress, San Francisco.
- June 8-11-4th Annual Georgia Air Tour, leaving Atlanta.
- June 11-16-Government & Aviation Section, 11th Annual Institute of Government, University of Southern California, Los Angeles.
- June 12-14-Engineering & Maintenance Conference, Air Transport Association, Los Angeles.
- June 13-Air Transport Association, Meeting of Purchasing Committee, Los Angeles.
- June 13-Southwestern Division, National Association of Airport Executives, Oklahoma City.
- June 17-19-Carolina Aero Club's Airplane to NY World's Fair.
- June 18-19-Florida Aviation Association Convention, West Palm Beach.
- June 19-Institute of the Aeronautical Sciences session of American Association for the Advancement of Science, Milwaukee.
- June 20-28-Florida Air Tour to NY World's Fair, leaving West Palm Beach.
- June 21-24-20th Convention, U. S. Junior Chamber of Commerce, Tulsa.
- June 24-July 9-10th Annual National Soaring Contest, Elmira, N. Y.
- June 25-26 Amateur Air Show of Chicago, Curtiss Field.
- June 30-July 1-Institute of the Aeronautical Sciences meeting, Elmira, N. Y.
- July 4-Airport Dedication, Madison, Wis.
- July 8-23-2d International Aeronautic Salon, Brussels, Belgium.
- July 10-American Society of Mechanical Engineers, Popular Meeting on Trans-Oceanic Flying, Golden Gate Exposition, San Francisco.
- July 14-Annual Summer Cruise, Sportsman Pilots Association, from Wings Field, Ambler, Pa., to Ste. Jovite, Canada.
- July 16-23-Royal National Aeronautical Association Meet, Rimini, Italy.
- July 17-23-Cup of King Peter II of Yugoslavia, Fairey Airport, near London, England.
- July 23-Black Hills Aero Club Air Show, Spearfish, S. D.
- July 29-30th Anniversary of Army Aviation.
- Aug. 19-National Aviation Day.
- Aug. 20-21-Annual Air Show, Sheldon Aeronautics Club, Sheldon, Ia.
- Sept. 2-4-National Air Races, Cleveland.
- Sept. 4-Aero Club of the Republic of Poland International Competition for Gordon Bennett Cup, Warsaw.
- Sept. 4-8-ASME & Inst. Mech. Eng. of Great Britain, Meeting on Mechanical Problems of Modern Transport, New York.
- Sept. 11-15-International Congress of the Aeronautical Sciences, I. Ae. S. Columbia University, New York.
- Sept. 13-15-International Air Traffic Association Meeting, New York.
- Sept. 15-I. Ae. S. Dinner to Delegates to International Congress, New York.
- Sept. 16-International Aviation Day, New York World's Fair.
- Oct. 1-Deutsch Cup Race (speed), Etamps, France.
- Oct. 2-17-3d International Aeronautical Show, Milan, Italy.
- Oct. 5-7-SAE National Aircraft Production Meeting, Los Angeles.
- Oct. 16-20-National Safety Congress and Exposition, Atlantic City.
- Nov. 3-7-Anual Convention, Aeronautical Medical Association, Hollywood-by-the-sea, Florida.
- Dec. 7-8-Anual Meeting, Kansas State Aviation Association, Wichita.
- Dec. 16-I. Ae. S. Wright Brothers Lecture, New York.
- Dec. 27-Jan. 2-AAAS Winter Meeting Columbus, O.
- Apr. 26-28 (1940)-Air Congress of America, Southwest Division, Tulsa.

Plane to Museum

A single-engined Hornet-powered Boeing two-passenger mail plane of the type first flown with passengers and mail between Chicago and the Pacific Coast has been presented by United Air Lines to the Museum of Science and Industry at Chicago.

THE UNIVERSITY
OF TEXAS

Tentative Speakers

for U. of M. Airport Meeting Announced

A tentative list of speakers for the technical conference on airport construction, to be held at the University of Michigan, Ann Arbor, on June 7-9, has been announced by the airport conference committee through W. S. Housel, associate professor of civil engineering.

Arranged by the college of engineering at the U. of M., the conference has been planned in cooperation with the NAA, the National Association of State Aviation Officials, the American Association of Airport Executives and the Michigan state board of aeronautics. Meetings will be held in the Michigan Union.

Preliminary list of speakers follows:

Floyd E. Evans, director, Michigan board of aeronautics, and chairman, airport committee, NASAO; Clinton Hester, administrator, CAA; Robert H. Hinckley, CAA chairman; Charles L. Morris, president, NASAO, and director, Connecticut dept. of aeronautics; Asa Roundtree, director, Alabama division of aviation; F. W. Shepardson, chairman, Vermont planning board; Charles F. Horner, NAA president; C. V. Burnett, president, American Association of Airport Executives; Clifford W. Ham, executive director, American Municipal Association; R. W. Schroeder, United Air Lines' vice president; Richard C. Gazley, chief, technical development div., CAA.

B. M. Harloe, asst. administrator, WPA; W. M. Aldous, chief, soils-paving unit, CAA; Associate Professor Housel, research consultant, Michigan highway dept.; A. H. Wait, regional airport engineer, CAA; Harry K. Fisher, airport engineer, WPA; E. F. Kelley, chief division of tests, U. S. bureau of public roads; W. J. Emmons, associate professor of civil engineering, U. of M.; M. D. Catton, development dept., Portland Cement Association; C. L. McKesson, engineering and research director, American Bitumuls Co.; E. O. Rhodes, technical director, tar and chemical div., Koppers Co.; E. W. Klinger, Standard Oil Co. of N. J.; Wm. H. Schulzke, architect, Moline, Ill.; L. A. Vilas, director, Pyle National Co.; Robert F. Fogg, seaplane specialist, airport section, CAA; L. L. Odell, chief airport engineer, Pan American Airways.

Presenting sessions will be Henry C. Anderson, dean, U. of M. college of engineering; A. B. McMullen, chief, airport section, CAA; Lewis M. Gram, head, dept. of civil engineering, U. of M. Inspection trips and group discussion are being arranged.

IaE Meeting Announced

Maj. Lester D. Gardner, secretary of the Institute of the Aeronautical Sciences, has announced a meeting of that organization to be held June 30 and July 1 at Elmira, N. Y. in conjunction with the Soaring Society of America and in connection with the 10th Annual National Soaring Contest which will be held from June 24 through July 9 at Elmira.

More TWA Courtesy

More than 500 members of the Advertising Federation of America will be carried on 200-mi. flights over New York and the World's Fair by TWA during APA's convention in NY from June 18 to 22. The line's DC-3s will use Newark Airport. Scheme is said to be part of TWA's program to increase air-mindedness of regular business travelers. The series of courtesy flights is one of the largest ever offered a commercial organization. TWA recently set a new record for courtesy flights in Albuquerque, when it flew 1,759 high school students in an air youth project.

CAA Abolishes Post of Deputy Administrator

The CAA has abolished the position of deputy administrator created last August. The position had never been filled. The Authority also has abolished the position of assistant director of the Bureau of Safety Regulation made vacant by promotion of Richard S. Boulette. The economies recommended in the series of personnel changes by Clinton M. Hester, administrator, will mean an annual saving of about \$25,000.



Expansion of Mechanic Training Facilities Favored by Committee

Recommends Extensive Apprenticeship System; 60,000 Additional Aircraft Factory Workers Will be Needed for Military Development Program, Report Says

Establishment of extensive apprenticeship systems in all aircraft manufacturing plants and commercial air carriers' shops, and increased activity on the part of the public vocational and trade schools, together with the NYA and the CCC so as to expand existing facilities for the training of skilled mechanics "to the limit of peace-time practicability," were recommended to President Roosevelt May 13 in the initial report of the Inter-departmental Committee on Mechanics Training for the Aircraft Industry, headed by Oswald Ryan, member of the CAA.

The committee was of the opinion that 60,000 additional factory workers, together with the 40,000 now employed, will be necessary to meet the expanded military and naval air expansion programs, adding that this problem can be met "without requiring any extraordinary action on the part of the federal government or of the aviation industry." The larger problem, however, involves the "undisputed shortage" of mechanics that would exist in time of war, the report said, urging that this problem be solved at the earliest possible opportunity.

The 60,000 additional workers required under the expansion programs, the committee stated, should be divided approximately as follows: 10,000 supervisory and skilled personnel, 20,000 semi-skilled workers, and 30,000 workers requiring little or no particular skill. There will be a substantial requirement for technical personnel which has not been determined at the present time, the report said. According to a partially completed Employment Service survey, there are over 9,000 unemployed skilled workers experienced in the aircraft industry, and in addition over 79,000 unemployed skilled workers with experience in closely related industries, "all of whom have expressed a desire to enter the aircraft industry," the committee reported.

In time of war, the need for aircraft factory workers will be at least four to six times that needed in the present approved air expansion program, the report said.

"The existing facilities for the training of skilled workers should, therefore, be expanded to the limit of peace-time practicability," the committee stated. "Your committee has discovered that one of the principal limitations in such peace-time training is the objection made to any training of a group who would never find any use for their skill except in time of war. In view of this and other limiting factors, it is not anticipated that this expansion of existing training facilities can avert entirely a deficiency of skilled personnel for aircraft work in time of war."

"As a last resort in time of war, the remaining deficiency of skilled workers must be met by the emergency method of breaking down skilled jobs into semi-skilled operations, which can be performed by available semi-skilled workers or by beginners who can be trained in a relatively short time. It is important, therefore, that appropriate steps be taken immediately to develop plans to insure the most effective co-

operation in time of war of all groups concerned with the training and recruiting of the needed personnel."

The committee's recommendations were as follows:

Apprenticeship systems should be immediately established in all aircraft manufacturing plants and in all commercial air carriers' shops. Inasmuch as the number of apprentices in aircraft plants at the present time is only 250, it is essential that this number be immediately increased. The most effective method of getting apprenticeship systems in operation is through the creation of local joint trade apprenticeship committees. These committees should determine the proportion of apprentices to employed skilled mechanics, giving full consideration to probable needs in time of war. The Federal Committee on Apprenticeship, the Army and the Navy should cooperate in the development of such systems.

Public vocational and trade schools should be encouraged to assist aircraft companies in job training of employed workers and apprentices by conducting foremen conferences, teacher training courses, providing instruction facilities in related subjects for apprentices and providing evening trade extension classes for employed workers. Instruction standards should be raised, state and local public aviation schools expanded.

Youths showing particular aptitude for mechanical trades in the NYA work centers should be given aid to secure employment as apprentices or as beginners in aircraft plants, and to continue training in public vocational schools teaching aircraft trades.

The CCC should continue to inculcate desirable work habits in enrollees through its 1,500 camps and work projects and should continue such vocational and related training as is possible in connection with the prosecution of the work projects and camp educational program. Enrollees, juniors, and veterans, who have had mechanical training or experience, or who show an aptitude for mechanical work, should be carefully listed and made available for discharge to accept training, apprenticeship or employment.

Studies should be made to determine the minimum number of supervisory and skilled workers required in the aircraft industry in time of war, the committee said, adding that plans also should be made for providing the necessary skilled and semi-skilled workers, in order to expedite the expansion of the aircraft industry from a normal peace-time to a war-time basis.

In addition to Ryan, the committee is composed of the following: Louis

A 3100 HP Exhibit

Getting no little attention at the New York World's Fair is the 3,100 horsepower in-line liquid-cooled Fiat A. S. 6 engine in the Italian building. It's purely an experimental job and has never been flown, but it's quite a sight at that. Also in the Italian aviation exhibit is a Fiat A. 82 18 cylinder double row engine of 1,300 horsepower which is claimed to develop 1,500 hp. at take-off.

Johnson, Assistant Secretary of War; Charles McLaughlin, Assistant Secretary of Labor; Capt. C. W. Fisher, Navy Department; John C. Wright, Office of Education, Interior Department; Charles H. Taylor, CCC, and David Williams, NYA.

Sperry Opens New Klystron Laboratory

The immediate opening of a new radio research laboratory near Stanford University at Palo Alto, Cal., to facilitate the development of the klystron tube and to carry out engineering applications of the new tube in the aviation field has been announced by Sperry Gyroscope Co., Brooklyn.

R. E. Gillmor, president of the Sperry company, in making the announcement, said:

"Since work on the klystron project was started a year and a half ago we have been increasing regularly the number of engineers assigned to its development. As a result the present facilities are not adequate for our engineers and for Stanford's engineers engaged in this work. The shortage of space has become so acute that it now is necessary to open a new and enlarged laboratory which will be available not only to our own engineering staff but to Stanford's engineers."

The ultra-high frequency Metcalf-CAA blind landing system, which employs the klystron tube, was to be tested by the U. S. Army at Wright Field, Dayton, O., as explained in *AMERICAN AVIATION*, Apr. 1.

The new California laboratory where further research will be carried on becomes a branch of the research laboratory of the Sperry company, and will be under the direction of P. R. Bassett, vice president and chief engineer of Sperry.

First-Aid Kit Announced

A light-weight first-aid kit, especially designed for use on airplanes, has been announced by the Davis Emergency Equipment Co., 35 Van Dam St., New York. Kit's dimensions are $7\frac{1}{2}$ " x $4\frac{1}{2}$ " x $3\frac{1}{2}$ ".

A Famous Company Buys a Beechcraft



The Hudson's Bay Co. of Canada, one of the oldest companies in the world, recently purchased a Model 18D twin-engined Beechcraft airliner to facilitate communication with the company's far flung trading posts in northern Canada. The company was granted a charter in 1670, specifying that whenever the king, heirs or successors enter upon the territories granted, rent must be paid consisting of two elks and two black beavers. George VI now in Canada is the first King of England to visit Canada and receive the rent. Note the British Red Ensign on the plane; Hudson's Bay Co. is the only concern in the world permitted to use the British flag as a trade mark.

ARMY PICKS SEVEN MECHANIC SCHOOLS

Will Train 1,000 Enlisted Men in Civilian Centers Starting in July

The War Dept. on May 17 announced the selection of seven civilian schools for the training of 1,000 Army Air Corps enlisted men as mechanics. This announcement supplements the selection of nine civilian flying schools for primary flight training as announced in the last issue.

The seven schools are:

Curtiss-Wright Technical Institute of Aeronautics, Glendale, Cal.

The Aeronautical University Inc., 1330 S. Michigan Ave., Chicago.

Roosevelt Field Inc., Aviation School Division, Mineola, L. I., N. Y.

Spartan School of Aeronautics, Tulsa, Okla.

Casey Jones School of Aeronautics, Newark, N. J.

New England Aircraft School, 126 Newbury St., Boston.

Parks Air College Inc., East St. Louis, Ill.

Out of this group three were among the nine flying schools, namely Spartan School of Aeronautics, Parks Air College, and Curtiss-Wright Technical Institute through its Grand Central Flying School.

The War Dept. said these schools will augment its own service schools at Chanute Field, Rantoul, Ill., and Lowry Field, Denver.

The thousand enlisted men will be sent to the civilian schools during the period July 1, 1939, to June 30, 1940, following a preliminary course at Scott Field. They will be given training only in the subject of airplane mechanics. The Army will pay catalog prices plus one and a half cents per hour.

ARMY SEEKS CADETS

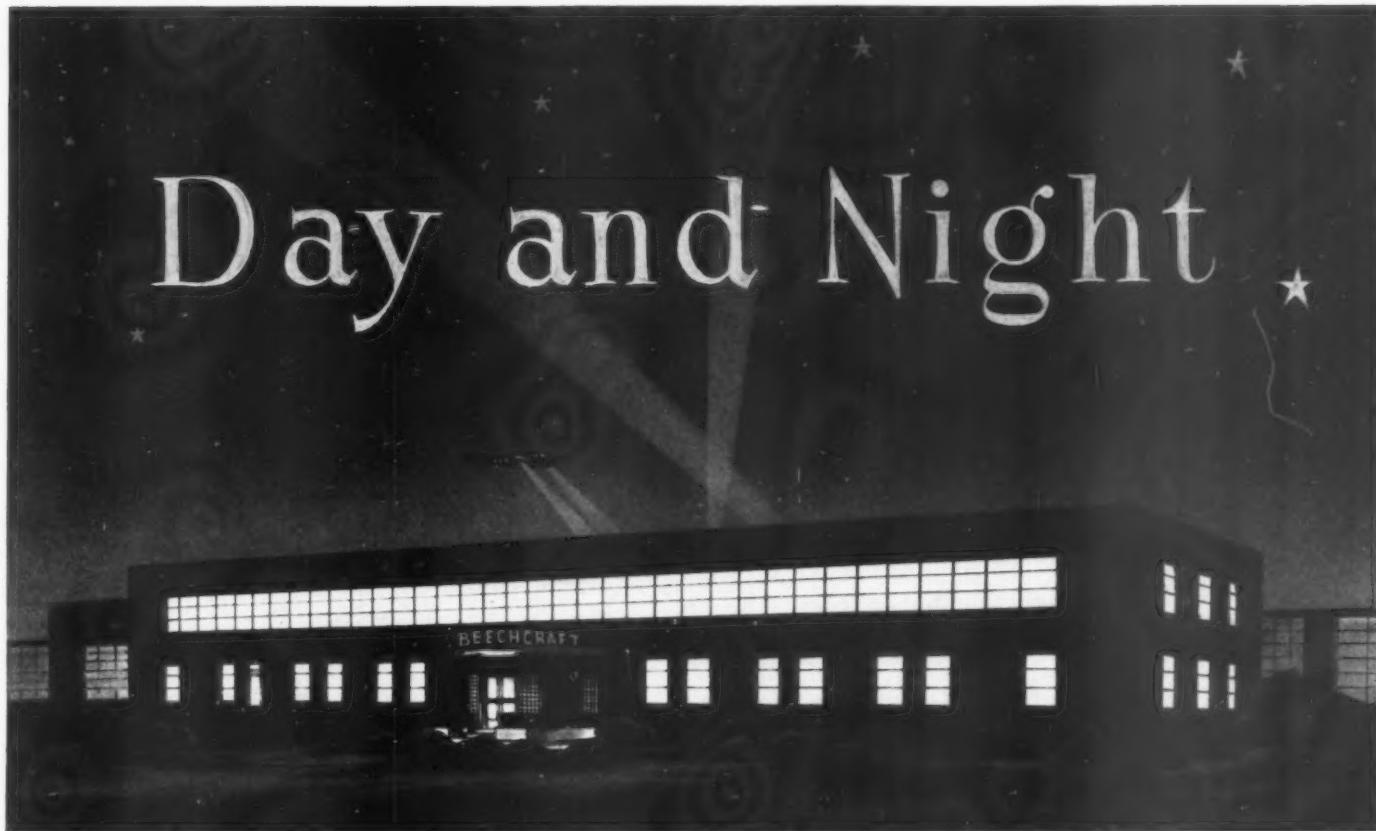
Will Send Boards and Officers to Visit Colleges and Universities

Army agencies are making strenuous efforts to increase the list of acceptable applicants for military pilot training in order that the production of trained personnel may not lag behind the procurement of aircraft, according to a War Department announcement. It is hoped the applicants may start training immediately when appropriated funds become available for this phase of the armament program.

To accomplish this, boards of Air Corps and medical officers are being ordered to travel by air and visit all the principal colleges and universities in the states that have been allotted to them. Candidates for appointment must be unmarried male citizens, between 20 and 26 years of age. Those who have not satisfactorily completed at least two years of standard college work must pass a written examination, which is the equivalent thereof. Flying cadets receive pay at the rate of \$75 per month while undergoing training, a ration allowance of \$1 per day, and they are quartered at no expense to them.

Aero Engineer Exams

U. S. Civil Service examinations for the following positions have been announced: principal engineering draftman (aeronautical) \$2,300 yearly; senior engineering draftsman (aeronautical) \$2,000; engineering draftsman (aeronautical) \$1,800; assistant engineering draftsman (aeronautical) \$1,620. Applications must be on file with the U. S. Civil Service Commission at Washington, D. C. not later than the following dates: June 12, if received from states other than those named below, in which case the date is extended to June 15: Ariz., Cal., Colo., Idaho, Mont., Nev., N. M., Ore., Utah, Wash., Wyo.



NEW ENGINEERING AND ADMINISTRATIVE BUILDING

The Beechcraft factory is busy day and night. Executives and workmen alike are exerting every effort to bring production up to current demands. An increase of more than 100% in personnel and a considerable increase in production tools are beginning to show the desired results.

Although the delivery delay of new Beechcrafts ordered by customers has been a little greater than has been satisfactory, during the past month or so, the situation is rapidly improving. It is expected that the waiting period for custom-finished Beechcrafts will be normal within another month.

The entire Beechcraft organization is gratified with the very tangible appreciation of Beechcraft quality, ruggedness, and performance, as expressed by present orders. These orders are not only for Beechcrafts to be used by the U. S. Army Air Corps, the Bureau of Aeronautics of the U. S. Navy, and

foreign governments, but also for both biplanes and twin engine monoplanes to be used by private pilots and business organizations in the United States and abroad.

The traditional Beechcraft high standards of material and workmanship not only are being maintained but are being improved wherever possible. Association with Army and Navy inspectors has made it possible to take advantage of the very wide service experience of these famous organizations, in the improvement of certain details.

The Beech Aircraft Corporation pledges its friends to increase its production to meet the demand for Beechcrafts just as rapidly as may be humanly possible, without allowing the slightest retrogression in the quality of its products. The desire and endeavor of every individual comprising the Beechcraft organization is to make each and every Beechcraft a perfect mechanism. Quantity output is distinctly secondary.

THE BEECH AIRCRAFT CORPORATION
6423 EAST CENTRAL AVENUE WICHITA, KANSAS, U.S.A.



B E E C H C R A F T

CAA Asked to Back Loans to Plane Buyers Similar to FHA Plan

A plan whereby the Civil Aeronautics Authority would furnish a government credit guarantee, similar to that given by the Federal Housing Administration in the home-building field, thus enabling private flyers to secure bank loans and pay for planes over an extended period of time, has been proposed to the CAA by interested parties.

The FHA permits banks to pass on the credit of individuals and make a loan, based on its own judgment. If the bank cannot collect the loan, after resorting to all legal means, the FHA is then responsible. The plan presented to the CAA differs from the FHA in that the Authority, because of the comparatively small number of applications that would be received, would pass on the credit. Also, a down payment would be required.

If a bank was unable to collect the loan from an individual, it would then turn over to the CAA the unusable flyable airplane, having been repossessed under the conditional bill of sale. The ship would be protected against flying hazards by reason of the obligatory insurance policy, now a part of every aircraft finance deal.

When a plane was turned over to the CAA, that agency could dispose of it in any of three ways: use it in its own work; turn it over to some other government agency, such as the Army, Navy, Marine Corps, Coast Guard, etc., or sell it on the open market. Proponents of the plan claim that only when the CAA would be compelled to sell a plane on the open market for a price less than the amount of the unpaid balance, could any loss occur to the government.

Parties interested in the plan also point out that the FHA's loss has only been 2% net on three-quarters of a billion dollars worth of business. In comparison with this, the business done by the CAA would be very small, probably not involving more than 2,000 deals a year, it is said.

Ohio Bureau Extinct

The Ohio state bureau of aeronautics has ceased to exist through failure of the house to allow necessary appropriations for the office.

The Publishers of AMERICAN AVIATION Announce with pride that the **SPORTSMAN PILOTS ASSOCIATION**

has voted to provide each member with an annual subscription as part of the association's dues.

- American Aviation welcomes the entire membership of America's leading sportsman pilot organization into its ever-growing subscription list, and appreciates the recognition SPA has thus given to the nation's most wide-awake, most alert and most newsy aviation magazine.

The trend is toward AMERICAN AVIATION

Dual Jobs



Miss Jewel T. Puckett of Tallahassee, Fla., attractive secretary of the aviation division, state road department, has been named secretary of the Florida division of the NAA. In this dual capacity Miss Puckett will coordinate state and national civil aviation and assist in promotion of the Florida Air Tour from West Palm Beach to the NY World's Fair on June 20. Appointment was made by Wright Vermilye, state NAA governor.

Lvcoming Tour Figures

A total of 29 states was covered by three Lycoming-powered planes, piloted by Bob O'Connor, George Lewis and Jim Pierol, in a recent country-wide demonstration tour sponsored by Lycoming Div., Aviation Manufacturing Corp. The three pilots, flying an Aeronca, a Cub and a Taylorcraft, visited 293 airports, contacted 71 distributors, gave 1,106 flight demonstrations and made 2,330 landings and takeoffs. A total of 731 flying hours and 61,987 miles were recorded by the flyers. The following averages were arrived at following the tour: 84.8 mph.; 2.7 gallons of gasoline per hour; 31.4 miles per gallon; .0205 quart of oil per hour; 4,133 miles per quart of oil.

Olympia Manager Appointed

Olympia, Wash.—The city commission has appointed John F. Mifflin manager of Olympia Municipal Airport. He succeeds Jack Cram who resigned some months ago to accept a position with the CAA in Washington. D. C. Mifflin had been acting manager.

The Publishers of

AMERICAN AVIATION

Announce with pride that the

SPORTSMAN PILOTS ASSOCIATION

Pilot, 17, Protests New CAA Age Ruling

One repercussion of the new rule adopted by the CAA raising the age limit for certificated pilots of private airplanes from 17 to 18 years for carrying of passengers, appeared in Bridgeport, Conn., when Charles Sharp, 17-year-old pilot protested publicly against the ban which may deprive him of his certificate. The ruling was recommended by Oswald Ryan, member of the Authority.

"I have 150 hours in the air and have carried 300 passengers," Sharp said in expressing belief that his judgment is sufficiently mature to permit him to carry passengers. "I have never had an accident and haven't even received a scrape from my flying so far." He will be 18 in September and hopes to have 200 hours for a commercial certificate at that time.

Iowa Operators Organize

Waterloo, Ia.—The Commercial Aircraft Operators' Association at its charter meeting here elected John H. Livingston of Waterloo as president. Other officers include Glen Niederauer, Marshalltown, v.p.; W. T. Saxon, Cedar Rapids, secy-treas.; Paul Shaw, Iowa City; Martin Hiteman, Sioux City; R. L. McCaffree, Dubuque, and Leo Brennan, Des Moines, directors.

Georgia Airport Sold

Milledgeville, Ga.—Announcement that a flying school would be established here for private and commercial pilot training has been made by Stratton Hard, Atlanta building contractor and president of Southern Air Line Inc. The school, to be located at Milledgeville Airport, will be a subsidiary of the airline, with a \$100,000 building program scheduled to start on property purchased recently.

Orleans Commission Named

New Orleans—The Orleans airport commission, with jurisdiction over Shushan Airport, has been established by the Orleans levee board. Members of the commission are Leon G. Tulague, T. H. Bernhardt, S. J. Gonzales and George Bohn. They will serve without remuneration.

Hyannis Building Started

Hyannis, Mass.—Construction of a new administration building at Hyannis Airport has been started on the site of the old office building, recently moved to the rear of the hangar for shop and classroom purposes.

Club Honors Gov. Barrows

Gov. Lewis O. Barrows of Maine recently was made an honorary member of the Aero Club of Bangor.

Aero Groups

Houston, Tex.—The newly organized Houston unit of the Women's Aero-nautical Association has elected the following officers: Mrs. Leona Hagy, pres.; Mildred Kreiter, v. p.; Betty White, secy-treas. Mrs. Andy Anderson of Dallas, governor of the WNAA, organized the unit. Charter members include Helen Thevenot, Mrs. Dude Camden, Dorothy Minshall, Mrs. Kathryn Nottingham, Mrs. Ivy Baskett, Mrs. Vera Coulter, Mrs. Eunice Osmum, Ann Bassett and Jean Koberg.

Wichita, Kan.—Andy Swenson, chairman of the aviation committee, chamber of commerce, has announced that Alfred MacDonald and Earl Hutton will serve as vice chairmen of the committee.

Columbia, S. C.—John H. Nance, Jr., R. D. Nance and O. W. Jordan have been elected to direct the newly formed Columbia Aero Club, located at Municipal Airport. Club has purchased an Aeronca K from W. W. Owen of Columbia.

Grand Rapids, Mich.—Grand Rapids chapter of NAAA recently reelected the following officers: J. G. Vinkemulder, pres.; Charles Kindell, Jr., 1st v. p.; James Allen Lowe, 2nd v. p.; Ray J. Bonini, treas.; Norman E. Price, secy. The above serve on the board of directors with Paul H. Miller and John W. Dreyer.

Cincinnati, O.—Cincinnati Aero Club is the tentative name of a newly formed organization at Administration Bidg., Lunken Airport. Preliminary committee is headed by Frank M. Fairchild. Other members are Win Young, Ed Nirmaier, Al Comello and Myra Sycks.

Worcester, Mass.—Officers of the recently organized Association of Private Airmen are: Henry Knowlton, pres.; S. J. Plumpton, v. p.; Benjamin Stone, secy.; Winthrop Addy, financial secy. This organization of pilots flies from North Grafton Airport.

Kansas City, Mo.—The Kansas City unit of the Women's National Aeronautics Association sent its delegate, Marion Newell, to the national convention at Salt Lake City, May 26-27, via the airlines. Miss Newell is promotion chairman of the local unit and has been appointed chairman of the national nominating committee.

Lewiston, Me.—Adrian A. Cote, Lewiston, has been elected president of the Aero Club of Maine, succeeding Frederick G. Payne, Augusta. Other officers are Dick Stoddard, Auburn, sergeant at arms; Albert Stowe, Lewiston, treas.; Wesley Marden, Waterville, secy.; Dr. Clifford Strange, Portland, v.p.

Requirements Lowered

Milwaukee—Airplane operators who have been required to carry \$50,000 policies covering life and property damage and costing \$400 a year in premiums were benefitted by recent action by the county board when required policies were reduced to \$10,000 for injuries or death and \$5,000 for property damage. Annual premiums will be about \$180. Requirements apply to operators using county airport as their base. Supervisor George J. Hermann, chairman of the county highway committee, told the board: "This is a compromise with those persons who wanted to do away with insurance entirely."

Building Plans Approved

The city council of Westfield, Mass., has approved plans for a new hangar and administration building at Barnes Airport to cost about \$68,000. It is planned to erect the two buildings under a WPA project whereby the federal government would pay \$38,000 and the city \$30,000, the city's share to be raised by a bond issue.

Tennessee Distributing Books

Over 1,000 books have been distributed by the Tennessee bureau of aeronautics to school and public libraries within recent weeks in answer to requests from school boards and civic organizations for worthwhile books concerning aviation. The books are supplied without charge. Director of the bureau is Maj. Walter Williams.

Named Aviation Secretary

Seth Richards Jr. has been named secretary of the aviation committee of the Spokane, Wash. chamber of commerce, replacing Ken Jones who resigned to accept another position.

TOUR PLANS REVISED

Florida Flight to N Y Will Leave West Palm Beach on June 20; 3 Days in Air

Revised plans for the Florida Air Tour, when 100 or more planes will fly from West Palm Beach to NY World's Fair, call for a three-day flight, according to Wright "Ike" Vermilya of West Palm Beach, Florida governor of the NAA. Although it had been announced the flight would take off from Jacksonville after a one-day hop from West Palm Beach for those who attend the Florida Aviation Association convention June 18-19, it was agreed that the tour will start from West Palm Beach the morning of June 20.

The return flight will start the morning of June 26. Ralph Lockwood, Atlanta, southeastern representative of Gulf Oil Co. who will be flight director, said gas and oil will be furnished from West Palm Beach to NY and return. C. V. Whitney, Florida aviation director, and his secretary, Miss Jewell Puckett, have been busy for several weeks promoting the state convention and air tour. Cooperation of South Carolina officials was offered by Lester Martin, state director.

Georgia Flies June 8

Georgia's 4th annual air tour will leave Atlanta on June 8 for a four-day flight about the state, it has been announced by Richard E. Allen, state NAA governor. The stop at Augusta, will be featured by dedication of a new hangar at Daniel Field. Other stops include Sea Island, Athens, Savannah, Macon, Brunswick, McRae and Griffin. Additional stops were to be announced. William K. Jenkins, president of Atlanta's Aero Club, is chairman of the air tour committee.

Air Congress to Tulsa

Tulsa—Tulsa has been awarded the next convention of the southwest division of the Air Congress of America, it was decided at a meeting on Apr. 29. The organization, formerly known as the Southwest Aviation Conference, will meet Apr. 26-28, 1940.

Fire Damages Amphibian

Wilson, N. C., May 15—A fire which broke out in a U. S. Marine Corps truck near here recently completely destroyed the wings of a Marine Corps 1-MJ-8 amphibian which was on another truck. Damage was estimated at about \$15,000. Entire plane was valued at \$80,000.

Indiana Air Service Elects

Harry S. Wagner was reelected president of Indiana Air Service Inc., at a recent meeting in South Bend. H. G. Myers was named v. p.; Claude L. Horton, former v. p., now is secy. and Louis Taylor, former secy.-treas., now is treas.

Dallas School Plans

Dallas—Maj. W. F. Long, who has acquired full interest in Dallas Aviation School and Air College at Love Field, has announced an expansion program which will include purchase of new planes, additional personnel and a new dormitory.

Bristol Pilot and Instructor

Toby West of Richmond, Va., has been appointed instructor and pilot at Bristol (Va.) Municipal Airport.

Competitive Events on Chicago Program

A list of four competitive events has been announced as a part of the Second Amateur Air Show of Chicago, to be held on Curtiss Field, June 25. The show "is primarily designed to afford amateur pilots flying light planes the opportunity of competing for trophies against other amateurs. It is a sporting event for the sportsman pilot," the announcement said.

Bob Morrow and Pat Sweeney, who arranged last year's meet, are in charge of the second show. The competitive events they have listed include precision flying, spot landings, bomb dropping and closed course racing. About 300 pilots from the middle west who fly ships of 75-hp. or less have indicated that they will be present. It was pointed out that pilots who have not sent in entries are welcome to address letters to Mr. Morrow, director, at the Sherman Hotel, Chicago, postmarked before midnight, June 17.

Walter Williams Speaks

Kansas City—Maj. Walter Williams, director of aviation for Tennessee, described his state private flying plans to the local NAA chapter here May 20 as the guest of C. R. Mooney, aviation secretary of the KC chamber of commerce. On the previous night he talked in Columbia, Mo., before University of Missouri students, as the guest of Sid Cleveland, airport manager at Columbia.

Oklahoma Air Tour

Oklahoma City—The Oklahoma Air Tour will be held June 8-9-10 starting at Oklahoma City and stopping at 13 cities. About 35 planes are expected to participate. The committee in charge includes James Brazell, chairman; Jerry Sass, Keith Kahle, John Burke, Herbert Howell and Bennie Turner.

Beech's NY Representative

A. Patten Wilson has been appointed New York public relations representative for Beech Aircraft Corp., Wichita, Kan. Wilson will be located at 9 Rockefeller Plaza. For the last five years he has handled general promotion work for O. J. Whitney, Inc., air charter firm and export sales organization handling Beechcraft and Jacobs engine sales in Latin America.

Tom Flaherty Promoted

Tom Flaherty, for several years district airport engineer for the CAA with headquarters in Little Rock, Ark., has been promoted to the position of acting CAA regional airport engineer with headquarters in Kansas City. He will have supervision over seven states. Flaherty is one of the best known flyers and airport experts in the country.

McNamee Succeeds Hutchinson

Donald B. McNamee of Cincinnati has been named chief pilot of Cincinnati Aircraft Service, Lunken Airport. He succeeds Clifford Hutchinson who is in training for the position of first officer for American Airlines.

Heads Miami Association

Claude E. Pullen has been elected president of the Greater Miami (Fla.) Airport Association.

Aeronca President**New Aeronca 65-hp. Series Announced**

A new 65-hp. series of Aeroncas, following the basic principles of design and construction of the present 50-hp. series, has been announced by Aeronautical Corporation of America, Cincinnati. The Chief 65 is a two-place, side-by-side, strut-braced, high-wing monoplane, the landplane having a gross load of 1,150 lbs. and a useful load of 480 lbs. The seaplane model has a gross load of 1,253 lbs. and a useful load of 473.

"The outstanding feature of the new landplane and seaplane is the increased performance gained by the additional horsepower and improved aerodynamics," the announcement said. "The landplane tops at 105 mph. and cruises at 95 mph. The seaplane's top speed is 100 mph., and it cruises at 90 mph."

Additional performance figures and specifications for the new 65 are: Landplane—landing speed, 35 mph.; rate of climb, first min., 600 ft.; service ceiling, 15,000 ft. Seaplane—landing speed, 40 mph.; rate of climb, first min., 500 ft.; service ceiling, 13,500 ft.

Bazley Out in Pa.

Hal Bazley, acting director of the division of aeronautics for Pennsylvania, was relieved of his position May 11. He succeeded Cammy Vinet who was released when the new state administration took office in January. Bazley has been with the division for several years. Since January, 30 of the division's 48 employees have been dismissed. Reorganization of the division is expected in June.

Brownsville Expanding

One hundred and six acres have been secured and 30 acres remain to be secured under option in the expansion program for Brownsville (Tex.) municipal airport, according to City Manager Robert Runyon. The above acreage will be added to the port's original 488. Construction will start on three paved runways, 7,000 ft. long and 100 ft. wide.

Nevada Port Site Approved

Fallon, Nev.—Approval of a mile-square site proposed for a new airport for Fallon has been given by the irrigation district board. Site is being sought by local student flyers headed by Charles A. McKay who expects to purchase a plane if the airport is acquired and a hangar built.

Willie (Suicide) Jones Makes 'Miscellaneous' 'Chute Jump

Reports based on readings of a sealed barograph indicate that on Mar. 2, Willie (Suicide) Jones, Chicago Negro, made a delayed parachute jump from 24,468 ft., falling to 800 ft. before opening his canopy. The NAA in Washington, D. C., reporting on the barograph reading, advised Jones that no official records are kept of parachute jumps, but said the highest previous jump recorded in this country, 22,733 ft., was made by Smaranda Braescu, a woman, on May 19, 1932, at Oakland, Cal. Jones' delayed fall was recorded as 23,668 ft. The jump was made above Dixie Airport, Harvey, Ill., from a Bellanca plane powered with a Wasp motor. Unofficial world record is 26,575 ft., set in July 1934, by Nikolai Evdokimoff, Soviet army officer. NAA filed Jones' feat under "miscellaneous performances."

Free School Closes

Oklahoma City—The free aviation ground school here originated by Keith Kahle, vice president of Trans-Southern Airlines, and sponsored by the Oklahoma City Aviation Club, completed its three-month course May 11. The class started with 1,300 students with 500 completing the course. Eight-hour flying courses were donated as prizes to the best students by John Burke, manager of Wiley Post Airport, and Haskall Shaw, operator at the municipal field.

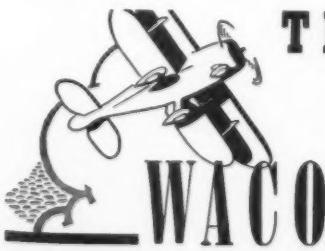
THE AIRPLANE OF TOMORROW

• The Waco "Tricycle" lets you enjoy tomorrow's "simplified flying" today! It's not uncommon for men who have never before touched the controls of an airplane to take off, fly and land the Waco "Tricycle." It's safe—easy to fly! And it takes you where you're going in a fraction of ground travel time. Your local dealer will gladly demonstrate the

Waco "Tricycle" and explain the 9 1/4% full-coverage insurance and the term-purchase plan.

Safety to the 'Nth degree—luxurious comfort—outstanding performance . . . that's the Waco "Tricycle."

THE WACO AIRCRAFT COMPANY, TROY, OHIO



CAA Issues Summary of 1928-37 Aircraft Accidents, Casualties

A complete summary of all aircraft accidents and casualties from 1928 through 1937 was issued recently by the CAA in Bulletin No. 3. Data contained in the bulletin are based on reports accumulated and upon investigations and public hearings conducted by the former Bureau of Air Commerce, and have been published in order to present a cumulative record. Accidents to military aircraft are not included.

Conclusions arrived at by the compilers of the bulletin are divided into two parts, i. e., air carrier service and miscellaneous flying. For the former classification, the conclusions are: (1) from the reports available on European flying activities for 1936, the safety of air travel on air carriers of the U. S. appeared then to be nearly 2½ times greater; (2) the number of passenger-miles flown yearly increased from 84,000,000 in 1930 to 188,000,000 in 1934 and to 550,000,000 in 1937; (3) under causes of accidents in this class of flying (air carrier), the pilot errors are chargeable about equally to errors of judgment, poor technique and carelessness or negligence; (4) material failures have decreased since 1932 and power plant failures decreased appreciably in 1936, and 1937; (5) miscellaneous causes are traceable largely to weather conditions, with airport and terrain next in order; (6) the number of forced landing and landing accidents has decreased appreciably during the last five years, but there has been an increase in the number of taxiing accidents; and (7) the miles flown per fatal accident increased from 890,000 in 1928 to 6,000,000 in 1933 and 12,800,000 in 1937.

Under miscellaneous flying, conclusions are: (1) of 17,050 accidents occurring in this class of flying during the 10-year-period, 1928-1937, 47% or nearly half occurred in pleasure flying, 26% in commercial flying, 20% in instructional and 4% in experimental flying; (2) under causes in this class, 53% were due to pilot errors for the 10-year-period; poor technique is the outstanding contributing cause in miscellaneous flying accidents; (3) power plant failures predominate among material failures; (4) weather, airport and terrain predominate among the miscellaneous causes; (5) in pleasure flying, spins & stalls without engine failure, forced landings, regular landings and take-off accidents predominate, and (6) the number of miles flown in miscellaneous operations fluctuated over the last 10 years, the low years being 1928 and 1933; the number of accidents per mile flown has, however, shown a consistent decrease.

There are numerous tables and charts in the bulletin, showing miles flown per accident and fatal accidents during the 10-year period, analysis of air carrier accidents, vital statistics and results of accidents, nature and number of accidents both in air carrier service and miscellaneous flying, causes of accidents, etc. The bulletin presents a complete and valuable study, superseding Aeronautics Bulletin No. 13 which included only information up to 1935.

Persons desiring copies of the bulletin should write to the publications and statistics section, Civil Aeronautics Authority, Garfinkel Bldg., Washington, D. C. Title of the publication is "Aircraft Accidents and Casualties, CAA Bulletin No. 3."

With Aviation Exhibit

Edward H. Rogers, Jr., graduate of E. K. Smith's Air Traffic School, is connected with U. S. Aviation Exhibit Inc. at the NY World's Fair.

National Air Race Entrant



A view of the new Folkerts racing plane recently tested at Kansas City Municipal Airport and which Clayton Folkerts, the designer, expects to enter in the Thompson Trophy race at the National Air Race in Cleveland in September. The plane has a wing span of only 16 ft., weighs less than 1600 lbs., and is powered with a 400 hp. Menasco. Its reputed speed is said to be 360 mph. (International News Photo).

Germany Assails Records; Claims Absolute Speed and Gliding Marks

Germany, in less than a month, twice has claimed a new world speed record for landplanes, in addition to claiming a new gliding record. The most recent claim, made on Apr. 27, followed a flight by a Messerschmidt ME-109-R over 2 kilometers (1.24 mi.) at an average speed of 55.11 km/h. or 468.92 mph. Fritz Wendel, 24, piloted the machine, powered by a 1,175-hp. Mercedes-Benz DB-601 engine. It was reported the plane was a serial type and that timing was done with electrical cameras.

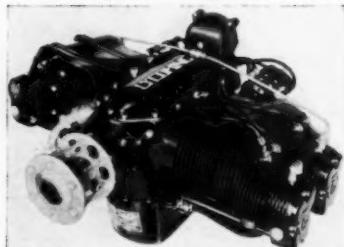
On Mar. 30 Capt. Hans Dieterle of the German Air Force flew a Heinkel He-112U, single-seater landplane, at 463.943 mph. over a regulation 3 kilometer course at Oranenburg, near Berlin. The plane was powered by a 2,000-hp. Daimler-Benz engine. The

absolute speed record had been held by Italy since Oct. 23, 1934, when Warrant Officer Agello flew a Macchi-Castoldi 72 racing seaplane at 709.209 km/h (440.67 mph).

A Messerschmidt Bf-113R held the landplane speed record of 510.95 km/h (379.625 mph) made on Nov. 11, 1937. The German achievement on Mar. 30 raised the absolute speed record by 23 mph. and the landplane record by 84 mph. It was pointed out that the 463.943 mph. speed is 60% of the speed of sound at sea level.

Hans Braeutigam of the National Socialist Flying Corps recently flew 352 kilometers (218 mi.) in a two-seater sailplane, giving Germany claim to a new world record in long-distance gliding to a prearranged destination. With one passenger, Braeutigam covered the distance in 5½ hrs.

Lycoming 65



Although approved by the CAA with a rating of 75 hp. at 3,100 rpm., the above engine will be featured as the Lycoming 65 (with a 10-hp. reserve) until more light planes are stressed for 75 hp. Announced by Lycoming Div. of Aviation Manufacturing Corp., the new 65 is engineered for larger models in the light-plane field. Designated as the Lycoming 0-145-B series, this newest member of the Lycoming family is a direct drive, four-cylinder, horizontally opposed, air-cooled engine with single or dual magneto ignition.

Chicago Branch Opened

United States Aviation Underwriters Inc., 80 John St., New York, managers of the United States Insurance Group (generally referred to as USAIG) have announced opening of a Chicago office located in the Insurance Exchange Bldg., 175 W. Jackson Blvd. The new office will be in charge of James R. Graham, who for the last four years has managed the Chicago office of Aero Insurance Underwriters. U. S. Aviation Underwriters maintain branches in Los Angeles and Washington, D. C.

RCA Introduces New Receiver, Transmitter

Aircraft receivers AVR-15 and 15A, 200 to 410 kcs, and aircraft radio transmitter AVT-15, have been announced by RCA Manufacturing Co., Inc., Camden, N. J. The AVR-15 receiver is arranged to operate from dry A and B batteries, the power developed by the RCA AVT-15 transmitter or from a special approved vibrator power unit (AVA-51). These power units are available for either 6 or 12 volt operation. Receiver is tunable over the radio range and weather broadcast band of 200 to 410 kcs. A switch is provided for instant change over to the traffic control frequency of 278 kc. When approaching an airport the receiver tuning may thus be left on the radio range frequency at all times. A flip of the traffic control switch brings in the control tower yet permits instant return to the radio range frequency to which the receiver is tuned.

Concerning the AVT-15 aircraft transmitter, the company announcement said "Capable of ample power output for any average aircraft communication requirement the total weight of the entire installation is less than 23 pounds including a reel antenna system and all accessories." Two crystals may be carried in the transmitter and the unit quickly switched and tuned to either frequency when accessible to the pilot in flight. When remotely installed the transmitter may be tuned and locked on any one frequency between 2,500 and 6,700 kcs, and turned off and on by means of the remote control units.

When used with its companion receiver, the AVR-15, no additional separate power supply is required as the transmitter is designed to supply the power for both units. "This combination also obviates the necessity of the transmitter remote control panel as the receiver off-on switch lights the filaments of the transmitter tubes and places this unit in readiness for instant operation. A complete, 2-way system with but 2 controls," the company announcement said.

Porterfield Representative

An agreement has been reported signed by Porterfield Aircraft Co., Kansas City, Mo., and Canadian Car & Foundry Co. whereby the Canadian company will represent Porterfield craft in Central and South America and the Caribbean Islands. Canadian firm has contracted to take 50 planes of the various 14 Porterfield models in the first year. Edward Porterfield, president of the company bearing his name, has announced.

Records

A report from Palm Springs, Cal. on Mar. 24 said Jacqueline Cochran piloted her Beechcraft plane to "about 33,000 ft." breaking the women's altitude record for craft of 965 cu. in. displacement. She wore an oxygen feeder during the flight, which was recorded on a barograph in charge of Larry Therkleson, NAA official.

Alexander P. De Seversky was reported to have set a record between Copenhagen and London, 650 miles, by flying the distance in 2 hrs. 25 min. on Apr. 9. The flight was made in a convoy fighter which he had designed.

Announcement of a new altitude record for women glider pilots carrying a passenger, established on Apr. 14 by Miss Lucretia Buxton, was made by officials of the Southern California Soaring Assn. It was said a calibration of the barograph used in the flight indicated that Miss Buxton reached an altitude of 5,100 ft., 400 ft. higher than the previous record.

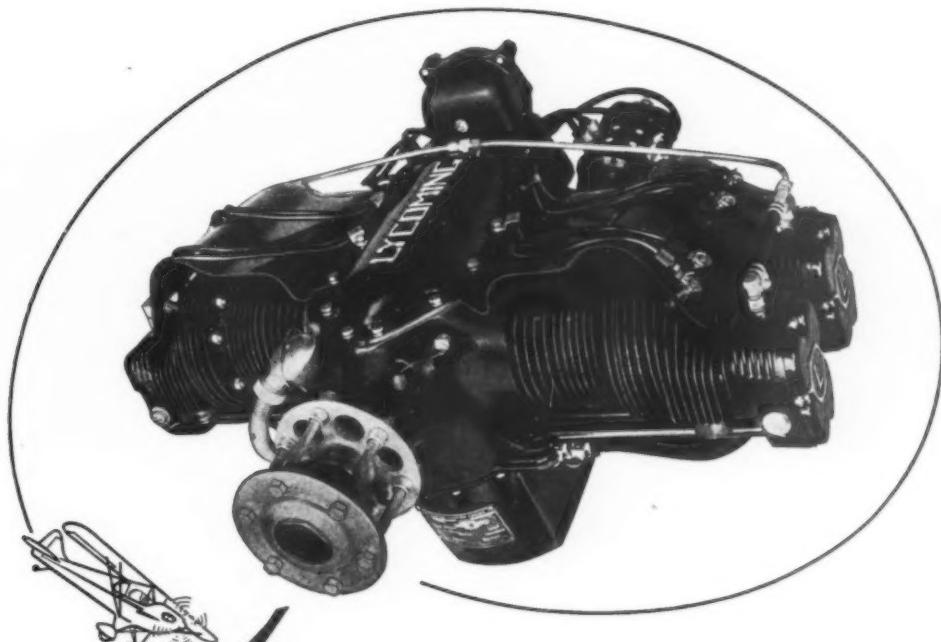
According to the "Air Corps News Letter" for Apr. 1, Lieut. Benjamin S. Kelsey, Air Corps, on Oct. 26, 1938, "flew a new Army pursuit plane from Dayton, O. to Buffalo, N. Y. at an average speed of 350 mph. Lieut. Kelsey stated that this was a record for an Army Air Corps plane."

A new non-stop flight record between Paris and Algiers was established early in May when a Lockheed 14 operated by Air Afrique covered the 908-mile route in 3 hrs. 55 min. Former record was 5 hrs. flat. Marshall Headle, Lockheed chief test pilot, was at the controls as the twin-engined airliner sped along at an average speed of 232 mph. Transport was powered by two Pratt & Whitney Hornet engines. The plane was the first of three to be delivered to the government-subsidized French line.

Flight Instructor



William P. Sloan, above, has been appointed a flight instructor at the Ryan School of Aeronautics, San Diego.



Announcing... The New

LYCOMING "65"*

HERE is the big brother of the Lycoming "50", the engine that has won enviable fame as "The Star of the Skyways." The new Lycoming "65"★ is engineered for the larger models in the light-plane field. These airplanes which have proved so popular should benefit by this engine's additional horsepower coupled with smooth Lycoming performance.

Designated as the Lycoming Aircraft Engine 0-145-B Series, this newest member of the famous Lycoming family is a direct-drive, four-cylinder, horizontally op-

posed, air-cooled engine with single or dual magneto ignition. In the new Lycoming "65"★ you get what no light-plane engine but a Lycoming can give—precision and performance born of years of experience in the manufacture of engines for military use under rigid government inspection. Fly behind the new Lycoming "65"★ and thrill to its smooth-flowing power.

FREE LITERATURE We shall be glad to send you, on request, details and specifications on the new Lycoming "65"★. Address Department AM69

* Although approved by CAA with a rating of 75 horsepower at 3100 r. p. m. this engine will be featured as the Lycoming "65"★(with a 10 horsepower reserve) until more light planes are stressed for 75 horsepower.

LYCOMING DIVISION OF AVIATION MANUFACTURING CORPORATION, WILLIAMSPORT, PA., U. S. A.
Cable Address: AVIATCOR



LYCOMING



RELIABLE ENGINES FOR MILITARY TRAINERS, PRIVATE AND COMMERCIAL AIRPLANES

CHAMBER TO BEGIN ITS EXPORT DRIVE

John M. Rogers Heads Large Committee; Financing for South America Studied

Organization abroad of regional and country advisory committees comprised of aircraft and engine factory representatives is contemplated by the Aeronautical Chamber of Commerce as one step in a long term program calculated to protect the industry's foreign trade and stimulate it wherever necessary, it became known following a meeting May 3 of the chamber's reorganized export committee.

An export financing committee will be set up for the purpose of studying that branch of foreign trade. The attitude of commercial banks relative to discounting without recourse of foreign paper will be sought and the committee agreed to work for a change in the policy which now prohibits the Federal Export-Import Bank financing items on the "Control List" which includes aircraft. The committee wants the policy changed so that facilities of the Bank may be used to assist the sale of aeronautical products in countries south of the United States.

John M. Rogers, vice president of Douglas Aircraft Co., resident in Washington, D. C., was elected chairman of the committee. Seventeen of the committee's 26 members were present for the first meeting. The committee is to be enlarged to 41 members, with a subcommittee of 12 to meet at frequent intervals. On the subcommittee are:

Palmer A. Hewlett, Aviation Mfg. Corp.; Howard S. Welch, Bendix Aviation Corp.; James P. Murray, Boeing Aircraft Co.; W. H. Weihmiller, Consolidated Aircraft Corp.; Jack Allard, Curtiss-Wright Export Corp.; Courtland Gross, Lockheed Aircraft Corp.; J. R. Miller, United Aircraft Export Div.; Robert B. Les, Sperry Gyroscope Co.; Ted Weld, Piper Aircraft Corp.; and Carl I. Friedlander, Aeronautical Corp. of America.

Members of the chamber will be asked to report periodically the percentage of their gross business classified as export and the amount of domestic employment accounted for by their exports during a given period. Irving H. Taylor, head of the chamber's export department, presented his plans for development of foreign markets.

Position Finder Placed on Ships

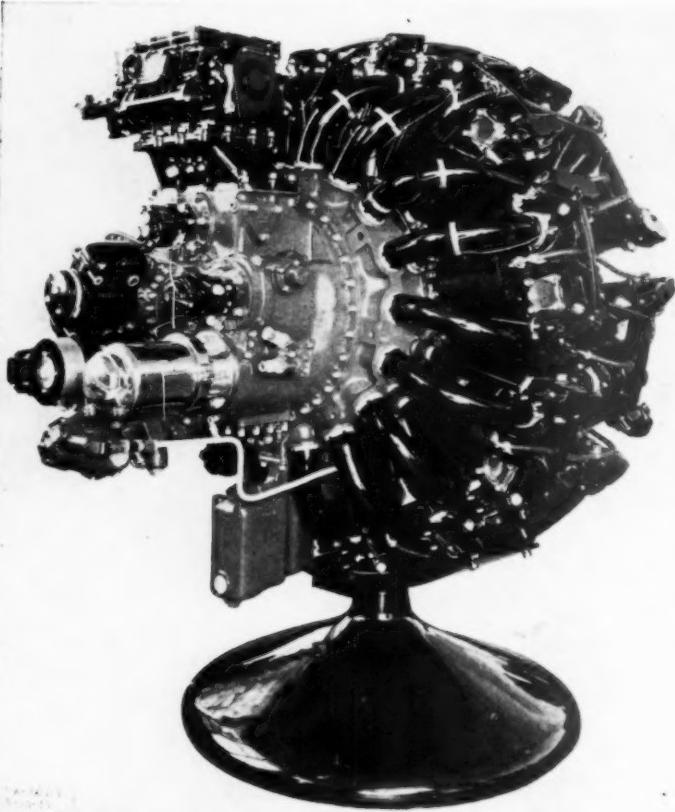
Glenn Markt Invention Now Standard Equipment; Simplifies Procedure

American Airlines has placed a position finding protractor as standard equipment in all of the company's ships, according to Ralph Damon, vice-president in charge of operations. The principle of operation is based upon readings taken from direction finder loop bearings upon radio signals.

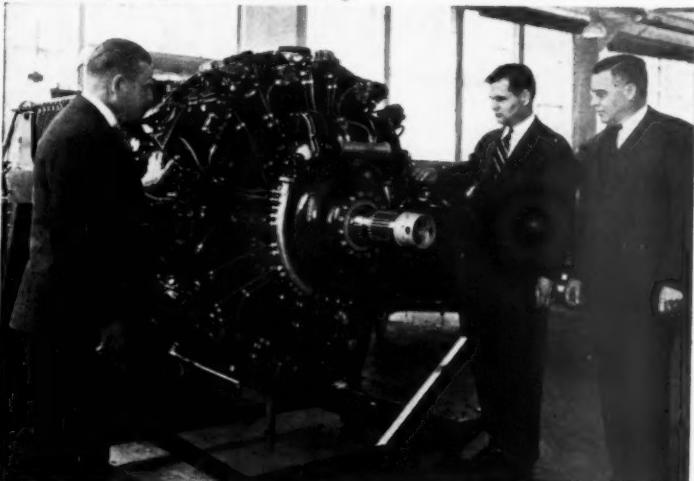
The protractor, which simplifies the plotting of a "fix" or position of plane in flight, is the invention of Glenn E. Markt, assistant airways engineer for American.

The complete unit consists of a special map board, maps and protractor, the maps indicating radio ranges, broadcast stations and cities. These maps are mounted on spools on the fourteen inch square map board and operate similarly to a roll film camera. With the map itself scaled to dimensions of one inch for each 24 miles, an area of over 100,000 square miles is visible at all times upon the board. As the plane progresses, the spools are turned so that at all times the area over which the plane is flying is visible for the pilot's inspection.

Largest Air-Cooled Engine: 2000 HP



Three-quarter view of the 18-cylinder 2000 H. P. Wright Duplex Cyclone developed by Wright Aeronautical Corp.



The Wright Duplex Cyclone being inspected by three officials of Wright Aeronautical Corp. Left to right, George Chapline, vice president; P. B. Taylor, chief engineer, and M. B. Gordon, vice president and general manager.

Work Lauds Naval Aviation

American naval aviation leads the world in point of adaptability, quantity and speed, James Work, president of Brewster Aeronautical Corp., told shareholders at their annual meeting. "In the last year," said Mr. Work, "American aviation increased speeds around two miles a minute over 1937 rates, as a result of improvements in airplane design and greatly improved engine performance . . . New materials like flexible glass, magnesium and plastics have contributed to the improvement of American planes." Directors were reelected at the meeting, and directors later reelected the present management.

New Blimp Christened

Akron, O.—Goodyear's new blimp, "Rainbow," was christened here recently by Mrs. Hazel Schippe, president of the women's chapter of the NAA, who smashed a bottle of liquid air over the ship's prow. The Rainbow is 150 ft. long. With a diameter of 41 ft. and a gas capacity of 123,000 cu. ft., it carries a pilot and six passengers.

Mechanics Employed

Nicholas Meken, master mechanics' course graduate of Roosevelt Aviation School, has been employed by Wright Aeronautical Corp., Paterson, N. J. Robert Phillips, mechanics' course graduate of the Roosevelt school, and until recently in the employ of Lear Developments Inc., has been employed as mechanics for Bernarr Macfadden and will be stationed at Bendix Airport, N. J.

NACA Reports

The National Advisory Committee for Aeronautics, Navy Bldg., Washington, D. C., has listed the following technical reports, notes and memos available. Quantities are limited.

TR 637. Determination of boundary-layer transition on three symmetrical airfoils in the NACA full-scale wind tunnel, by Abe Silverstein and John V. Becker.

TR 646. The compressibility burble and the effect of compressibility on pressures and forces acting on an airfoil, by John Stack, W. F. Lindsey and Robert E. Littlell.

TR 647. Tests of NACA 0009, 0012 and 0018 airfoils in the full-scale tunnel, by Harry J. Goett and W. Kenneth Bullivant.

TR 651. Downwash and wake behind plain and flapped airfoils, by Abe Silverstein, S. Katzoff and W. Kenneth Bullivant.

TR 650. Resume of air-load data on slats and flaps, by Carl J. Wenzinger and Francis M. Rogallo.

TR 651. Some elementary principles of shell stress analysis with notes on the use of the shear center, by Paul Kuhn.

TR 652. Some fundamental considerations in regard to the use of power in landing an airplane, by Walter S. Diehl.

TR 653. Comparison of profile-drag and boundary-layer measurements obtained in flight and in the full-scale wind tunnel, by Harry J. Goett and Joseph Bicknell.

TR 654. Physical properties of synthetic resin materials, by Meyer Fishbein.

TR 655. The effects of some common surface irregularities on wing drag, by Manley J. Hood.

TR 656. Torsional stability of aluminum alloy seamless tubing, by R. L. Moore and D. A. Paul.

TR 657. The frequency of torsional vibration of a tapered beam, by Robert P. Coleman.

TM 889. Investigation of the lift distribution over the separate wings of a biplane, by D. Kuchemann. (From Luftfahrtforschung).

TM 890. Experiments on a slotted wing, by P. Ruden. (From Deutsche Luftfahrtforschung Jahrbuch 1937).

TM 891. Theoretical and experimental study of ignition lag and engine knock, by Fritz A. F. Schmidt. (VDI-Fortschungssheft 392-supplement to Forschung auf dem Gebiete des Ingenieurwesens, ed. B, vol. 9, Sept./Oct. 1938).

TR 649. The "Pack" Method for Compressive Tests of Thin Specimens of Materials Used in Thin-Wall Structures, by C. S. Aitchison and L. B. Tuckerman.

TR 653. A Study of Air Flow in an Engine Cylinder, by Dana W. Lee.

TM 892. Investigations and Tests in the Towing Basin at Guidonia, by C. Cremona. (From Hauptversammlung der L.G.L., Oct. 12-15, 1938).

TM 893. Contribution to the Theory of the Heated Duct Radiator, by H. Winter. (From Luftfahrtforschung, vol. 15, no. 10/11, Oct. 10, 1938).

TR 698. Propeller Tests to Determine the Effect of Number of Blades at Two Typical Solidities, by E. P. Lesley.

TM 899. Tests of an NACA 23012 Airfoil with a Slotted Deflector Flap, by R. O. House.

TM 700. Theory of Automatic Control of Airplanes, by Herbert K. Weiss.

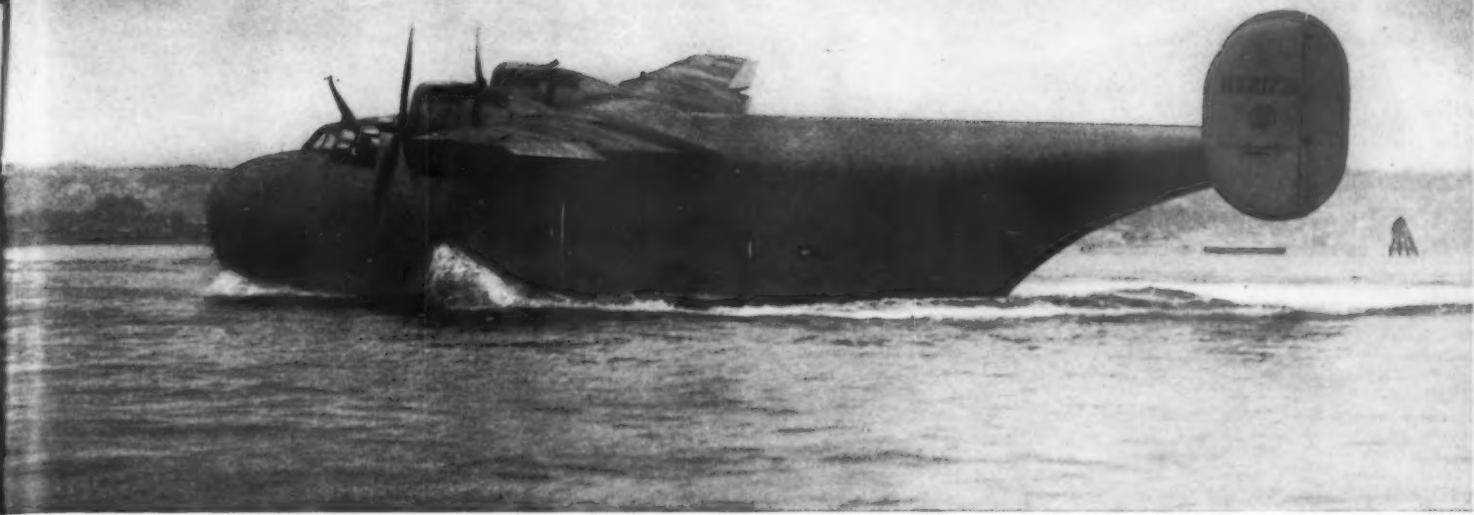
TM 701. Intermittent-Flow Coefficients of a Poppet Valve, by C. D. Waldron.

TM 702. Wind-Tunnel Tests of Several Forms of Fixed Wing Slot in Combination with a Slotted Flap on an NACA 23012 Airfoil, by M. J. Bamberg.

TM 703. Wind-Tunnel Investigation of Effect of Yaw on Lateral-Stability Characteristics: I—Four NACA 23012 Wings of Various Plan Forms with and without Dihedral, by M. J. Bamberg and R. O. House.

International Meet in '40

The Royal Aeronautical Society of England with the cooperation of the Air Ministry and the Society of British Aircraft Constructors, will hold an International Aeronautical Conference in London in July, 1940. Announcement was made at an annual meeting of the society by A. H. R. Fedden. Lectures will be given by outstanding leaders in aeronautics throughout the world. The organizing committee plans to hold the conference at three-year intervals.



CONSOLIDATED LONG-RANGE 52 PASSENGER FLYING BOAT

powered by

TWO DUPLEX-CYCLONES

Consolidated Aircraft Corporation's new long-range, 52-passenger Flying Boat introduced the 18-cylinder 2000 H.P. Wright Duplex-Cyclone aircraft engine.

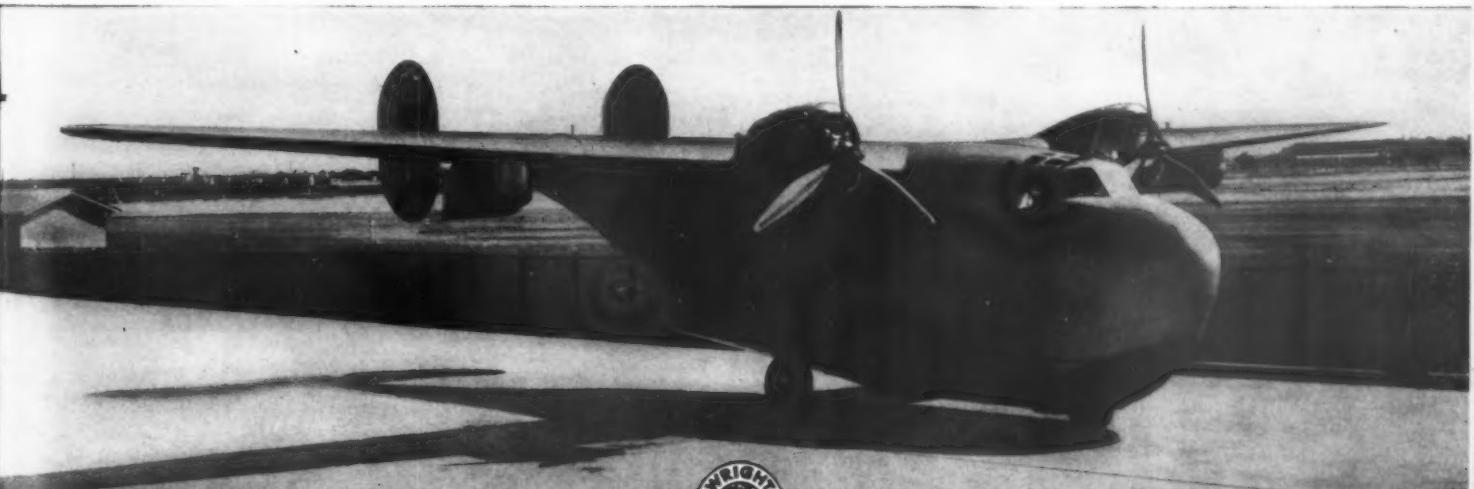
As a commercial airliner, the Consolidated Model 31 has a maximum capacity of 52-passengers and a crew of five for day operations and sleeping accommodations for 28 passengers for protracted flights or trans-oceanic service.

Although no performance figures may be released, the total of 4000 H.P. delivered by the two Duplex-Cyclones has given the airplane an exceptionally high-speed, range and load capacity.

Outstanding features of the Model 31 include two hull decks—one above the other—providing a large flight control compartment and eight additional large compartments.

The ship is equipped with a hydraulically operated, retractable tricycle beaching gear—the first application of such equipment.

"Fly With Wright The World Over"



WRIGHT *Aircraft* **ENGINES**

FOREST SERVICE MAY BUY PLANES

Seeks Change in Law; Will Not Make Purchases if Private Contractors Available

The Forest Service of the Department of Agriculture will be authorized to buy airplanes for use in its work, provided a change in wording of the 1940 appropriation bill is approved by Congress. The bill is pending before the Senate, the changes in wording having been approved by the House.

Heretofore, the Forest Service has not been able to buy more than one airplane per year, because among its functions listed in past appropriation bills was the "maintenance and operation of aerial fire control by contract or otherwise, including the purchase of one airplane." By cutting out the last clause, the Forest Service will be able to purchase any number of airplanes if it believes the purchases are necessary.

However, it was made clear to the House Appropriations Committee that the Forest Service did not intend to purchase planes if it can get the work done by private operators. "There is no intention on the part of the Forest Service to embark on an extensive airplane-buying program," the committee was told. "In fact, no airplanes whatever will be purchased if it can be avoided. However, situations are developing in the west which may make it necessary for the Forest Service to buy a few airplanes because privately-owned planes cannot be obtained as needed to transport food supplies and equipment to men fighting fire in isolated sections of the national forests."

The Forest Service has been using airplanes for 20 years—first in cooperation with the War Department, and since fiscal year 1928 by contracting for this service with commercial flyers. The Forest Service is willing and anxious to continue the present contract arrangement but contractors are finding it difficult to continue in business because of the limited amount of airplane travel and transportation in the sparsely settled sections of the west. Recent developments in airplane design and construction are directed toward the manufacture of planes which are either too large or too small to meet the needs of Forest Service transportation. For that reason the number of commercial flyers who own planes which are suitable for economical transportation on the national forests is being steadily reduced.

What the Forest Service would like to do, it is learned, would be to guarantee certain private flyers a fixed amount of business each year. However, a FS official stated that they have hesitated to do this, being afraid that a small "irresponsible" operator would underbid a more desirable one.

Movie for Frisco Fair

A movie entitled "Safe Landing" for the science exhibit at the Golden Gate International Exposition, San Francisco, has been completed by the film division of the Department of Interior for the NACA. Pictures show testing of plane equipment, including blind flying instruments, pontoons and cylinders at Langley Field.



Dr. Lytle Adams, originator of the pick-up air mail service, had reason to smile at the inauguration of the service May 12.



Richard Dupont, one of the backers of All American Aviation Corp., was an active participant at the ceremonies. Dick is a former holder of U. S. soaring records.

Clinton M. Hester, CAA Administrator (on left) and U. S. Senator James Meade of New York, (right) champion of air mail expansion, were among the prominent guests.



Col. Edgar S. Gorrell, president of the Air Transport Association, was a top-bracket speaker.

GREGOR DETAILS

Canadian Fighter Has High Speed of 300 mph.; Lands at 57 mph.

Chief feature of Canadian Car & Foundry Co.'s new FDB-1 single-seater fighter, pictured in AMERICAN AVIATION for May 15, is that while it has a high speed of 300 mph., its stalling or landing speed, with high-lift devices, is said to be only 57 mph. Better known as the Gregor Model 10, the plane will climb to 10,000 ft. in 3 min. Its climbing speed at sea level is 150 mph. Gross weight loaded is 4,100 lbs., and the craft has a service ceiling of 32,000 ft. Range is 645 mi. at operating speed.

Gregor's general specifications are: span, 28 ft.; length, 21 ft. 8 in.; height, 9 ft. 4½ in.; total wing area, 194 sq. ft. Provision is made in the machine for two 116-lb. bombs, two .50-caliber machine guns synchronized and firing through the three-bladed Hamilton constant speed propeller, and for 1,000 rounds of ammunition. Landing gear is retractable; fuselage is all duralumin and wings duralumin frame fabric covered.

Palmer Is Ryan Engineer

Appointment of Durward Palmer as plant engineer of Ryan Aeronautical Co., San Diego, Cal., has been announced by T. Claude Ryan, president. Formerly plant engineer of Douglas Aircraft Co., Palmer will be in charge of installation of all manufacturing equipment and facilities in the new Ryan factory now under construction. Before his three years with Douglas, Palmer studied engineering at California Institute of Technology.

All American Aviation Opens Two Routes

Service over experimental air mail routes 1001 and 1002 was inaugurated in Pennsylvania, West Virginia and Ohio on May 12 by All American Aviation, Inc., using the pick-up and delivery device invented by Dr. Lytle S. Adams. The routes are not in full operation as yet and other stops are to be added during June and July.

Numerous Washington officials flew to Morgantown, W. Va. on May 12 and attended ceremonies marking the opening of the new service. Luncheon speakers included Sen. James Mead (D., N. Y.) and Clinton Hester, CAA Administrator, while the following persons spoke at afternoon ceremonies at the airport: Congressman Jennings Randolph (D., W. Va.); Col. Edgar S. Gorrell, president of the Air Transport Association; Charles P. Graddick, superintendent of air mail; Wayne W. Parrish, editor of AMERICAN AVIATION; John S. Wynne, Washington attorney, former chief of the Bureau of Air Commerce airport section, who selected the site of the Morgantown airport; Richard du Pont, president of All American Aviation; Dr. Adams, and William T. Hughes, Jr., mayor of Morgantown.

Others attending from Washington included Samuel J. Solomon, manager of the Washington Airport; William I. Denning, Washington attorney for several airlines, and Benny Griffin, CAA pilot.

Although official Post Office figures are not available, first-day mail loads carried by All American's six Stinsons were reported to be heavy. Incomplete figures showed a total of 2,752 pieces of air mail leaving Morgantown May 12, 2,982 pieces being dispatched from Marietta and approximately 2,000 pieces from Nitro.

Vinot, Pierol With All-American

Among the pilots now employed by All-American Aviation, Inc., which on May 12 inaugurated feeder air mail service in Pennsylvania, West Virginia and Ohio, are Camille (Cammy) Vinot, formerly director of aeronautics for the state of Pennsylvania, and James Pierol, formerly aviation editor of the Detroit News and later the New York Times. Other pilots with All-American are Hooler Holris, Norman Rintoul, Gerald McGovern and Thomas T. Kincheloe. Holris flew from Floyd Bennett Field to Copenhagen via Harbor Grace in 1931, carrying a passenger.

LA Faces Problem

Only federal money or some sort of inter-airline corporate action can continue work already begun at Los Angeles' municipal terminal, it is believed, following failure of the \$3,000,000 airport bond issue to reach the necessary two-thirds majority vote in a recent election.

Preparing Airport

The city of Giddings, Tex., has purchased 30 acres of land adjoining the 160-acre tract near town preparatory to building an airport using NYA corps for labor. A 2,500-ft. gravel runway is one of the field's improvements.

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miles due north of Chi-
cago's Municipal Airport,
21 miles northwest of Chi-
cago's Loop, or 7 miles
west of Wilmette and
Evanston, operates Airport
Radio Control Station
WAMS, receiving on 3105
and 6210 k.c. during day-
light hours, transmitting
on 278 k.c.

WHEN VISITING CHICAGO, hundreds of flyers make a point of stopping at the Curtiss Airport at Glenview, Illinois, because of its freedom from heavy traffic and its proximity to residential sections.

This U. S. Government Approved Repair Station is prepared to render maintenance service that is complete in every detail, including radio check-up.

Here you may have your ship stored, washed, overhauled, tuned up, made ready.

Here you may have your ship replenished with Texaco Aviation Gasoline and New Texaco Airplane Oil, used so extensively by major airlines.

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Aviation engineers, trained in selecting and applying Texaco Aviation Products, will be glad to demonstrate what savings can be made for you. For this engineering service or prompt delivery, phone the nearest of our 2229 warehouses or write to —

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Stinson Plane in front of
Chicago Aviation Hangar at Curtiss Airport
being serviced by Texaco truck. Texaco Aviation
Products exclusively are available here.

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poration, operators of
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are served here.



NEW TEXACO AIRPLANE OIL

AVIATION BUILDING DEDICATED AT FAIR

Yankee Clipper Sent on Way to Europe as Dramatic Feature of Exercises

Aviation's building at the New York World's Fair was dedicated May 20 with an added attraction that would be difficult to beat for sheer historic drama.

The exercises started at 1 pm. simultaneously with the taking off of Pan American's Yankee Clipper at Port Washington on its first mail-carrying trans-Atlantic flight. In the midst of an address by Robert H. Hinckley, chairman of the Civil Aeronautics Authority, the huge clipper circled over the fair and the outdoor exercises and Mr. Hinckley chatted by radio with Capt. A. E. LaPorte. The conversation was broadcast over loudspeakers and the 500 persons gathered for the exercises waved as the clipper passed overhead on its way out to sea.

As Mr. Hinckley was speaking to Capt. LaPorte, the latter interrupted to say: "I understand Capt. Towers is down there with you." Capt. John H. Towers, assistant chief of the Navy Bureau of Aeronautics, commanded the Navy's first trans-Atlantic flight 20 years ago.

Mr. Hinckley replied that Capt. Towers was on the platform and Capt. LaPorte then said: "Everything is fine. We are ready to go on. We are now about to proceed to Europe, sir."

Mr. Hinckley, looking into the skies but speaking into the microphone, replied: "Proceed to Europe, Capt. LaPorte—proceed with the mail."

A further historical highlight was the dedication of the building on the anniversary of the Lindbergh flight. The building was not ready for opening to the public, despite the dedication. Last word indicated it would be open May 27.

In addition to Mr. Hinckley the speakers were: Thomas A. Morgan, president of Sperry Corp. and chairman of the aviation advisory committee for the fair, who presided; Mayor Fiorello H. LaGuardia of New York; Capt. Towers; Major Gen. Delos C. Emmons, commander of the GHQ air force at Langley Field; Col. Edgar S. Gorrell, president of the Air Transport Association; Grover Whalen, president of the fair corporation, and Melvin Maas, Minnesota Congressman and ranking minority member of the House Naval Affairs Committee.

The ribbon officially dedicating the building was cut by Col. Gorrell. Following the exercises a reception was held in Perylon Hall. Many executives of the aviation industry, World War pilots and government officials were present.

Mail Carrier Regulation

In accordance with wage and hour provisions of the Fair Labor Standards Act, employees of contractors engaged in carrying the mails on star routes, or between postoffices, stations, railroad stations and other similar mail handling points for contractors must be paid at the specified rate. The Post Office was notified of the regulation on Mar. 31. Inquiry had been made by the Postmaster General as to status of employees who actually are employed by contractors, although they handle the mails.

Roosevelt Grads Employed
Leon Delairant, sheet metal course graduate of Roosevelt Aviation School, has been employed by Brewster Aeronautical Corp., and Alfred Nichols, also a graduate of Roosevelt, has obtained a position with Fairchild Aircraft Corp.

Pan Am. Completes 1st Scheduled Trans-Atlantic Mail-Express Flight

Regularly-scheduled trans-Atlantic mail-express service was inaugurated May 20, the 12th anniversary of Col. Charles A. Lindbergh's flight, when Pan American Airways' Yankee Clipper took off from Port Washington, L. I., landing at Marseilles 45 hrs. 38 min. later.



Capt. LaPorte

The flight took place just 24 hrs. after the Civil Aeronautics Authority had given Pan Am a certificate of convenience and necessity for a northern and a southern trans-Atlantic route. The certificate stated that five round trips, carrying mail and express only, must be made over the southern route via the Azores before passengers may be transported.

On board the Clipper were Capt. A. E. LaPorte; Charles A. Lorber, first officer; Adam E. Kalkowsky, Horace Brock, Robert D. Fordyce, Robert M. Elsey, and W. J. Garrison, all pilots; James W. Etchison Jr., engineering officer; John Fiske and Shelby M. Kritser, assistant engineering officers; Addison W. Beideman, radio officer; R. P. Dutton, assistant radio officer; William Thaler and Joseph Ravoli, stewards; Col. J. Carroll Cone, manager of Pan Am's Atlantic division; William K. McKittrick, chief steward of the Atlantic division, and Fred Laidlaw, postal representative for Pan Am.

There was total of 112,574 letters on the Clipper, weighing 1,603 lbs. and divided as follows: four sacks for Horta, 153 lbs.; five sacks for Lisbon, 175 lbs., and 26 sacks for Marseilles, 1,275 lbs. The CAA was not able to issue a rate decision, fixing Pan Am's compensation, in time for the first flight, but it is understood that the rate will be made retroactive.

Among those present at Port Washington at pre-sailing ceremonies were CAA members Harilee Branch, G.

Grant Mason, Jr., and Edward P. Warner; Fiorello LaGuardia, mayor of New York City, and Juan T. Trippe, president of Pan Am. CAA chairman Robert Hinckley, who was attending the opening of the aviation exhibit at the New York World's Fair, spoke to Capt. LaPorte by radio from the Fair after the Clipper took off at 1:00 pm. (EDT).

NWA Orders Librascopes

Order for 14 librascopes designed for use with the DC-3 has been placed by Northwest Airlines with Librascope Development Co. of Burbank, Cal. The device, invented by Lewis Imm, former BAC inspector, is an automatic center-of-gravity computer used in loading large aircraft. The librascopes was introduced three years ago and is used by the Army, Navy, 19 major airlines serving 47 nations, Howard Hughes, Dr. Richard Archbold, Los Angeles-Warsaw Polish airman, and others.

Cost of Expansion

TWA has announced that its new schedule expansion in March brings the total increase in potential passenger miles put into effect this year to more than 3,000,000 per month. Cost to the company was reported at \$1,075,000 in advertising, equipment and additional operating expenses, and brought the payroll to more than 1,300 employees.

KLM's Fleet Grows

The first of three new Douglas DC-3's delivered to KLM recently left Croydon Airport on the Amsterdam service. The new transports have been named Patris, Roek and Tapuit. They swell the line's fleet of Douglas Liners to 33, made up of 20 DC-3's and 13 DC-2's.

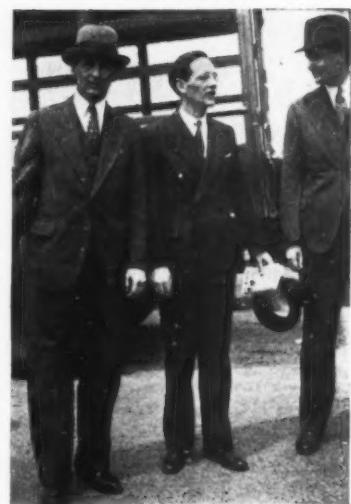
60 Sign for Training

Sixty young men have signed contracts with American Airlines which will pay them salaries while they attend a four-year apprentice mechanics' training school in the line's shops. American also has 30 men enrolled in the pilot school. Nineteen men recently completed reservation, work and allied studies.



Here is the scene at Port Washington May 20 shortly before the Yankee Clipper took off on the first regular mail-carrying flight across the Atlantic. New York's Postmaster Albert Goldman is shown handing a sack of mail to Capt. Arthur E. LaPorte, while looking on are Juan Trippe, president of Pan American Airways (extreme left) and Harilee Branch, member of the Civil Aeronautics Authority. (International News Photo).

CAA Staff



Three members of the staff of the Civil Aeronautics Authority snapped at Port Washington May 20. Left to right, L. Welch Pogue, assistant general counsel to the Authority; Sam Gates, chief of the international division, and Edward M. Weld, section chief in the international division. They watched the Yankee Clipper depart on its first mail-carrying trans-Atlantic flight.

PAA Leases in NY

Mayor LaGuardia of New York announced at the exercises dedicating the aviation building at the New York World's Fair that Pan American Airways has signed a 20-year lease on a hangar at North Beach Airport. The mayor said the lease was signed by C. V. "Sonny" Whitney, chief executive officer of Pan American.

Research Methods Used

In determining its additional May 1 schedule for Philadelphia to Cleveland and points west, United Air Lines applied market research methods by sending a questionnaire to 5,000 air travelers, seeking their preference for a flight supplementing the mid-afternoon trip. A four-to-one preference for morning flight was shown in returns. As a result, a new 9:05 a. m. (DST) departure was added. Returns also showed second preference for a later evening flight, so the former afternoon flight was moved to 5 p. m. (DST).

Scruggs Handles EAL Mail

Wirt P. Scruggs, Washington representative for Eastern Air Lines, has been appointed air mail manager for the company, in addition to his other duties. He will maintain headquarters in Washington. Scruggs was formerly connected with TWA.

A Few Copies Remaining

Gill Robb Wilson's

Aviation Poems

Leaves From an Old Log

The edition is limited and only a few remain.

Each volume is numbered, autographed by the author, bound in limp black leather or grey suede, printed on high quality deckle-edge paper—a real collector's treasure.

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**American Aviation Associates
Early Building
Washington, D.C.**

TWA Tries New Air Education Plan; 2,000 Albuquerque Students Ride Free

Air Youth Project Suggested by Tom Beck; School to Install Elementary Aviation Vocational Department; Parents' Comments Favorable

A new method of educating the public to air travel was tried with success by TWA during April when almost the entire enrollment of the Albuquerque, N. M. high schools were given free rides in a DC-3 under a plan known as the "TWA Air Youth Project."

The plan was suggested to Jack Frye, president of TWA, by air-minded Thomas H. Beck, president of the Crowell Publishing Co. who told Frye that he had heard of a similar scheme which had been used by an airline at Esbjerg, Jutland, along the Danish Peninsula. A total of 4,000 Esbjerg school children were given free rides over the city in two weeks, many of them bringing their parents to the airport for hops, Beck said, adding that the airline has done a profitable business ever since.

Albuquerque, a city of 50,000 with 1,700 high school students, was selected by the research department of the Crowell Publishing Co. as being the right size to handle with one plane.

Each student received an invitation to fly in the Air Youth Project. Attached to each invitation was a parental consent form which was required to be filled out before the student's name was entered on the airline manifest.

Flights began on Apr. 24 and in five days a total of 1,615 public high school students out of a total of 1,700 were taken aloft. After the second day all

80 of the teachers asked for rides to enable them to conduct discussions and answer students' questions. Also, the parochial high schools requested rides, so that in the five-day period there was a total of 97 flights with 1,940 passengers. On the sixth day, 100 businessmen and city officials, who had cooperated with TWA, were given rides.

During the flights, earphones connected to the four receiving sets and transmitter aboard enabled students to hear the federal radio range beam signals, the two-way radio conversations between Capt. L. W. Trimble and the TWA ground stations, and the voice of their instructor who explained the ships' maneuvers. Betty Seay, TWA hostess, was aboard on all flights.

As a result of the project, Superintendent of Schools Milne announced that the school board had decided on the organization of an elementary aviation vocational department next fall. The instructor will study aviation manufacturing plants in California this summer and confer with air transport officials.

Jack Frye stated that the company has received favorable comments from more than 600 parents of the Albuquerque high school students who took flights. One mother was quoted as saying that "My inherent fear of air travel has been dispelled by my son's enthusiastic account of his flight."

One Classroom They All Like



Two views of a happy plane load of Albuquerque high school students who went aloft in a TWA Skyclub classroom in the first "TWA National Air Youth Project". Out of 1,700 students, 1,615, or 95%, secured parental consent and spent 20 minutes in the air receiving instruction in the fundamentals of air transport, radio beams and elementary maneuvers.

Air Corps Expansion to Cause Temporary Co-Pilot Shortage, W. A. Patterson States

A total of 14 United Air Lines' co-pilots have resigned in the last 12 months and 10 more plan to resign in the near future to enter the Army and Navy, according to testimony given at the company's CAA rate hearing Apr. 27 by R. T. Freng, UAL's director of flight operations.

W. A. Patterson, president of United, stated after the close of the hearing that the Army's aviation expansion program will probably cause the airlines to be faced with a serious shortage of co-pilots, especially during the next two or three years. Reason given for the UAL resignations is that the Army and the Navy, mainly through pensions,

offer more security to men with the rank of co-pilot than do the airlines. This does not hold true for pilots, or captains, since flyers of this rank seldom leave an airline in favor of military services, Patterson stated.

United looks upon the co-pilot shortage as a temporary one, Patterson said, adding that after 1941 there probably will be too many men for the jobs. This is due to the fact that the CAA pilot training program and Army efforts along the same lines will have started to meet the needs of the military services. In the meantime, UAL plans to hire co-pilots who have been trained in private schools, Patterson explained.

Co-Amateurs



Both Jerry Dennis (right) and Nell Wayne Carlisle, Braniff hostesses, are amateur pilots and each has more than 30 hrs. solo time on light ships. Here they are shown in the pilots' compartment of a Douglas B-Liner comparing instruments with the instrument panels of the light planes they fly.

UAL'S Cheyenne Attraction

Before the summer is over United Air Lines expects to have escorted 10,000 visitors through its maintenance base at Cheyenne. Local chamber of commerce has placarded highways and put signs in hotel rooms urging people to visit the shops, one of the major industries there.

40 Salesmen to Fly

A nation-wide sales contest among 500 salesmen of Todd Co. of Rochester, N. Y., makers of bank paper and photographe, in which 40 salesmen showing the greatest sales during May will be rewarded with trips via American Airlines, has been called the greatest total air travel by one group in the history of the air company. Winning salesmen will fly to the Todd company's three-day celebration in Rochester at the end of June. Total mileage of the winners will be 70,020.

C & S Sponsors Trip

Pete French's seventh visit to Dutch Guiana, one which took him as far as he had been on any previous trip, was sponsored by Chicago and Southern Air Lines. The Webster Groves, Mo. insurance man filmed 3,000 ft. of colored pictures for the educational dept. of the line during the trip.

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MAJOR C. C. MOSELEY
PRESIDENT

Airline Expansion

(Continued from page 1)

rival and conflicting interests, to say nothing of the lack of precedents in determining convenience and necessity.

June 19: WESTERN AIR EXPRESS, for an extension of its route from Great Falls, Mont. through Glacier National Park to Lethbridge, Canada, connecting there with Trans-Canada Air Lines. WESTERN AIR has long sought permission to extend into Canada.

No more hearing dates on new route applications will be set until these four hearings are near completion. The four to be held are generally representative of various types of applications which have been filed.

It has been made clear in Washington, however, that air mail will not be carried on new routes until money is actually appropriated by Congress. The prospects of any of the regular 1940 Post Office air mail appropriation being used for new routes is slim at this time, for despite an increase of \$1,280,000 over last year, this increase is planned to be used exclusively for new schedules on existing lines and to meet increased payments ordered by the CAA.

It is unlikely that new routes can be opened up before next spring with the probable exceptions of such new lines as Great Falls-Lethbridge which have been "on the books" for action for some time.

That the Post Office Department wants to go along with the CAA in an expansion program has been indicated to AMERICAN AVIATION by First Assistant Postmaster W. W. Howes who has jurisdiction over the air mail. While Mr. Howes has made it clear that the Post Office is not obligated to put mail on new routes certified by the CAA (despite some opinions to the contrary), he did indicate strongly that the Post Office would consider the new routes for mail carriage very strongly and would assume that any new route certified by the CAA was valuable for the mail.

In other words, the Post Office is now relieved of the responsibility of deciding upon routes and will rely to a large extent upon the CAA's decisions regarding the merits of any new lines. There are some who have discounted the power of the Post Office in placing mail on airlines but competent opinion in Washington believes that the Post Office Department still is the key, in large measure, to air mail routes and is not obligated by law to use any routes which it does not deem suitable for air mail purposes.

In outlining Post Office policy, Mr. Howes said he would carefully consider every new route certified by the CAA and in October probably would go before the Bureau of the Budget to request funds for these new lines. If the Bureau of the Budget approves the request, then the funds will be requested from the House appropriations committee next December, and, if meeting this committee's approval, will be requested in the first deficiency bill in the next Congress in January. Thus the funds would be available during the latter part of the 1940 fiscal year which means sometime during the spring of 1940.

It recently has become evident that neither the Post Office Dept. nor the CAA nor prominent members of the House appropriations committee agree with the thesis proposed by Col. Edgar S. Gorrell, president of the Air Transport Association, that the PO is

obligated by the Civil Aeronautics Act of 1938 to place mail on new routes certificated by the CAA regardless of the availability of appropriations. In any event no mail will be placed on airplanes until money is actually appropriated and available.

Mr. Howes said the department has not made up its mind where the additional money in the 1940 appropriation will be spent starting July 1, but new pay schedules are in prospect for some of the lines. At least one feeder airline probably will be authorized during the year, although the \$1,000,000 Congressional cut in the PO requests eliminated any prospect for many feeder lines this year.

The CAA is making progress in clearing its books of certificate and rate cases. Only certificate cases yet to be heard are a few of Pan American's subsidiaries, all domestic cases having been heard. However only half of the domestic certificates have been issued. Only two major domestic rate cases are yet to be heard, although decisions have just started to come through.

As summer arrives, however, the major attention of the CAA turns to expansion and some 48 airline requests for 40 new routes face the five members and their staff. Some of these applications will be difficult to solve with as many as four companies seeking the same route. Approximately 15,500 new route miles are sought in the applications. The cost of air mail service or the prospective lines is not known at this time.

Reeves Improvement Starts

Los Angeles—Works Progress Administration has begun a \$35,000 unit in the \$2,200,000 joint improvement program at Reeves Field, naval airport on Terminal Island. Funds from the Navy, PWA, WPA and the city are being used in the program.

North Beach Greeters



First transport to land at NY's new North Beach airport was a TWA DC-2 which landed on the n/s runway on Apr. 29. Officials who greeted the plane after the landing were, l. to r., Robert Zimmerman, project engineer, TWA; First Officer G. H. Schafer; Capt. Orme Grove; Lt. Col. Breton Somervell, WPA administrator for NY; Gayle MacFadden, the airport's construction director and Capt. G. L. Robinson, WPA operations director.

TWA Appointment



Leslie G. Mitchell, formerly with Eastern Air Lines, recently was appointed traffic representative in New York for Transcontinental & Western Air. A native of Maine and a graduate of Harvard, '35, Mr. Mitchell worked for three years in New York and Richmond offices of Eastern, at one time under V. P. Conroy, TWA general traffic manager, at the time the latter was associated with EAL.

B-M Chief Pilot



New chief pilot of Boston-Maine Airways is Capt. Sanford B. Chandler. A million-mile, Capt. Chandler has been with Boston-Maine since June of 1934. He attended the University of Maine and the Army Air Corps schools at Brooks and Kelly Fields.

To Direct Publicity

Frank Buchner of East Orange, N. J., aviation editor of the Newark Ledger, has been appointed publicity director for New York & Bermudian Air Line.

I The Existing Air Transport System



The airline net work today, including the new Wichita-Pueblo route which opens shortly.

ALPA Negotiates Contracts

The Air Line Pilot, publication of the Air Line Pilots' Association, states that employment contracts with Pan American-Grace Airways, American Airlines and Braniff Airways have been completed with the exception of "several controversial sections which are being concentrated on at the present time." Negotiations with Penn-Central, United and Northwest will open soon, it is said.

Sabena Grows

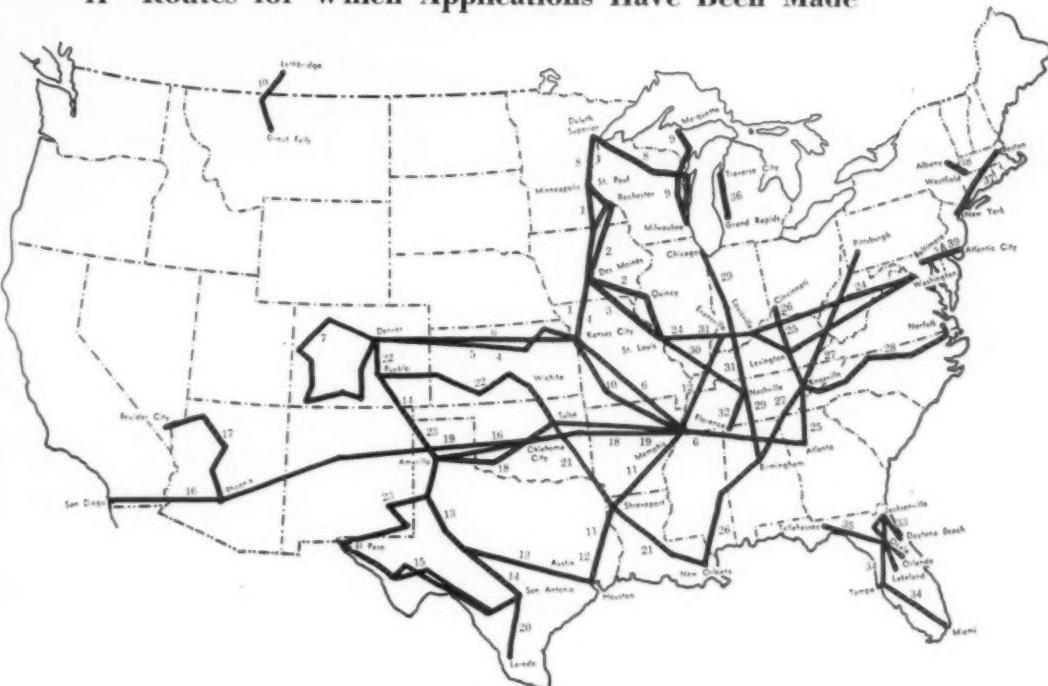
Statistics recently published of commercial aviation operations during 1938 by the Belgian SABENA company indicate that distance covered by the line's fleet increased 27%, according to the automotive-aeronautics trade div., Dept. of Commerce. Passengers carried rose 24%, baggage transport by over 40%, freight by 50%, while mail transport was 320% higher. Latter increase is due mainly to abolition of airmail surtax on a number of lines, the division points out.

Complete Testing Equipment

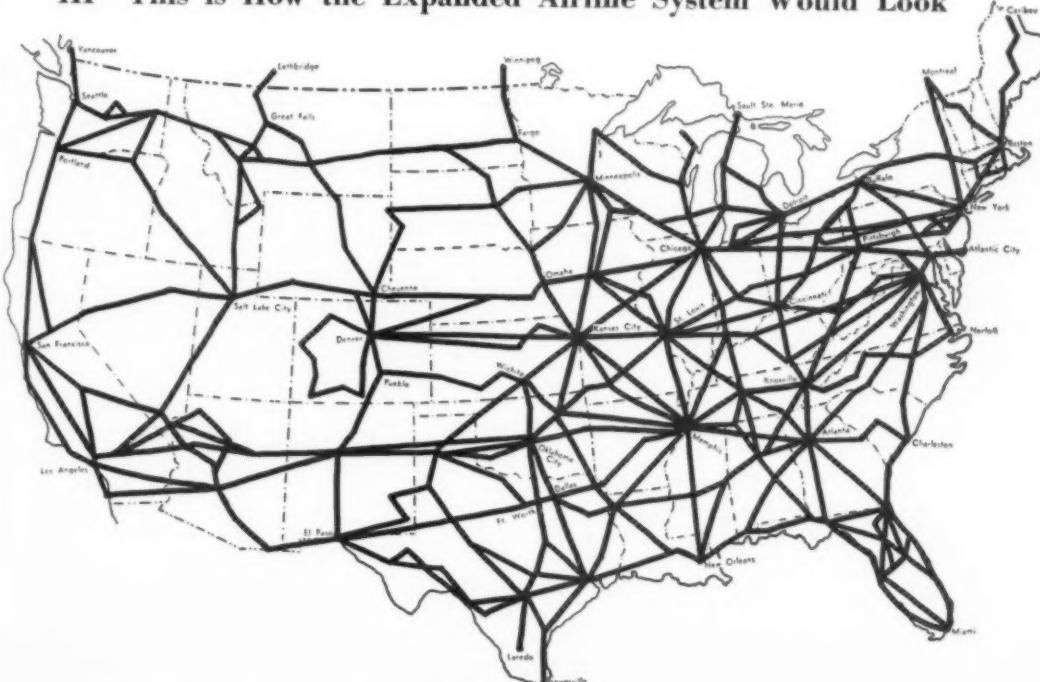
Installation of equipment costing nearly \$15,000 at the Lockheed Aircraft Corp., Burbank, Cal. is "the most complete apparatus for testing aeronautical structures and materials of any airplane manufacturer in the country," according to one expert. Equipment includes a 150-ton universal testing machine 18 ft. in height which will accommodate material up to 10 ft. long. Machine's capacity on compression and tensile tests is 300,000 lbs.

Sr. & Jr. Team

First father and son dualing as pilot and co-pilot occurred May 24 on Airline Feeder System. E. E. Bascham, operations manager and chief pilot, and his son, E. E. Bascham, Jr., made the day's flight from Newark to Springfield, Mass., and return. The son recently received his certificate and was taught to fly by his father.

II Routes for Which Applications Have Been Made

Forty-eight applications for certificates of convenience and necessity have been made to the CAA by existing and prospective airline operators. These applications fall roughly into 40 routes. The key numbers in the map refer to the adjoining general routes which are listed with only the important intermediate stops and with the various applicants. Note the popularity of routes in the south and the Mississippi Valley. Companies marked with an asterisk (*) were not operating prior to the establishment of the CAA.

III This is How the Expanded Airline System Would Look

If the CAA grants a certificate for all routes for which applications have been made, this is how the national network would look when new routes are added to the existing system. Note preponderance of routes in the central and southern areas.

Applications*(Key to adjoining map)*

1. Kansas City-Des Moines-Twin Cities
Mid-Continent Airlines
Braniff Airways
2. Rochester-Des Moines-St. Louis
Northwest Airlines
3. Des Moines-St. Louis
Mid-Continent Airlines
Braniff Airways
4. Des Moines-Kansas City-Denver
United Air Lines
5. Denver-Kansas City
Continental Air Lines
Mid-Continent Airlines
6. Denver-Kansas City-Memphis-Atlanta
Braniff Airways
7. Denver-Grand Junction-Durango-Alamo-Denver
Ray Wilson *
8. Twin Cities-Duluth-Milwaukee
Northwest Airlines
9. Milwaukee-Marquette
Northwest Airlines
10. Memphis-Kansas City
Eastern Air Lines
Missouri-Central Airlines *
11. Memphis-Shreveport-Houston
Braniff Airways
Chicago & Southern Air Lines
Eastern Air Lines
12. Houston-Memphis-Louisville
Missouri-Central Airlines *
13. Houston-Austin-Amarillo
Essair, Inc. *
14. Denver-Amarillo-San Antonio
Braniff Airways
15. San Antonio-El Paso
Braniff Airways
Continental Air Lines
16. San Diego-Albuquerque-Oklahoma City
American Airlines
17. Phoenix-Grand Canyon - Boulder City
Grand Canyon Airlines *
18. Amarillo-Oklahoma City-Memphis-Atlanta
Braniff Airways
19. Amarillo-Oklahoma City-Memphis
Trans-Southern Airlines *
20. San Antonio-Laredo
Andrew J. Burke *
21. Tulsa-Shreveport-New Orleans
Braniff Airways
22. Tulsa-Wichita-Pueblo-Denver
Braniff
23. Pueblo-Amarillo-El Paso
Continental Air Lines
24. St. Louis-Louisville-Washington
Eastern Air Lines
Missouri-Central Airlines *
25. Atlanta-Knoxville-Cincinnati
Delta Air Corp.
26. Cincinnati-Knoxville-Birmingham-New Orleans
Delta Air Corp.
27. Pittsburgh-Knoxville-Birmingham-Knoxville-Atlanta
Pennsylvania-Central Airlines
28. Norfolk-Raleigh-Knoxville
Pennsylvania-Central Airlines
29. Birmingham-Nashville-Chicago
Missouri-Central Airlines *
30. Nashville-St. Louis
Missouri-Central Airlines *
31. Nashville-Evansville-St. Louis
Eastern Air Lines
32. Nashville-Muscle Shoals
Eastern Air Lines
33. Jacksonville - Gainesville - Ocala-Lakeland
National Airlines
34. Jacksonville-Tampa-Miami
Eastern Air Lines
35. Tallahassee-Ocala-Orlando
Eastern Air Lines
36. Grand Rapids-Traverse City
Pennsylvania-Central Airlines
37. Boston-New York
Boston-Maine Airways
38. Westfield-Albany
Airline Feeder System
39. Baltimore-Atlantic City
Pennsylvania-Central Airlines
40. Great Falls-Lethbridge
Western Air Express

Govt. Travelers Get 15% Discount from 17 Lines After June 1

Government employees traveling on official business will be granted a 15% discount from regular one-way fares after June 1 by 17 domestic airlines, following approval May 26 by the CAA of a special tariff permission.

The companies participating are American, Braniff, Canadian Colonial (both the American and Canadian company), Chicago & Southern, Continental, Delta, Eastern, Inland, Marquette, Mid-Continent, National, Northwest, Pennsylvania-Central, TWA, United and Western Air Express.

At the same time, the Authority announced that it has enlarged the scope of its investigation into the air travel card plan to include this and other special discounts. The script investigation is already underway. "The action of the Authority in permitting the new government rates to go into effect on less than 30 days notice is merely a routine one and does not determine the reasonableness of the proposed discount or whether such discount is discriminatory," stated Robert Hinckley, CAA chairman.

American Airlines was the first to reveal its intention of allowing government travelers a 15% discount when on May 18 it announced that such a plan would be made effective June 24. The other airlines filed for June 1, however, and American subsequently changed to that date. The carriers pressed for quick action by the CAA, fearing a united protest by the railroads which would cause a postponement of the entire plan. Any such protest will now be handled by a hearing.

RUSSIANS USED '36 MODEL Similarity to Martin Bomber Seen; Polar Route to Soviet Suggested at Banquet

The plane used by Brig. Gen. Vladimir Kokkinaki and Maj. Mikhail Gordienko, Soviet airmen, in their attempted Moscow-NY flight, was a 1936 model with two 1,000-hp. engines, it was revealed by Gen. Kokkinaki in New York on May 12 at a banquet given by the Aeronautical Chamber of Commerce for the flyers. The plane was forced down on Apr. 28 on Miscou Island, New Brunswick, 700 miles from the goal.

When asked if the Russian plane wasn't similar in appearance to a 1936 Martin bomber, Gen. Kokkinaki said, "Aeronautical research in all countries is going forward along the same lines now." Polar air routes to Europe were advocated by Vilhjalmur Stefansson, president of Explorers' Club. Gen. Kokkinaki asserted the best Russia-U. S. route was over polar regions. Two hundred persons attended the banquet.

Lindbergh Visits Plants

A surprise visit to Wright Aeronautical Corp.'s plant at Paterson, N. J., was made on May 25 by Col. Charles A. Lindbergh in connection with his survey of U. S. aviation resources. Much of his time was spent in the experimental department, isolated from other parts of the factory. Attention was given the new 2,000-hp. Duplex Cyclone, 18-cylinder engine, the world's largest and most powerful air-cooled radial powerplant. Col. Lindbergh also made a short visit at the Curtiss Propeller Div. of Curtiss-Wright Corp., and on May 26 he arrived at East Hartford, Conn., spending time in United Aircraft Corp.'s research laboratories.

EAL Protests Weight-Credit Mail on New AA NY-Washington Trips

Eastern Air Lines on May 27 filed a protest with the CAA regarding the intention of American Airlines to add two more daily round trips between Newark and Washington on June 1, stating that the Postmaster General's order of May 18 authorizing the carriage of weight-credit mail on such flights would adversely affect Eastern.

Claiming that it has pioneered and developed the Newark-Washington route, Eastern stated that it has protested past additional schedules put on by American. If the June 1 trips are permitted, American will have six daily round trips and one additional one-way trip, whereas prior to May, 1939, the company had three round trips and one additional one-way trip, Eastern states.

"Applicant prays that pursuant to section 405(e) of the Civil Aeronautics Act, the Authority review and amend, revise, suspend or cancel such order of the Postmaster General dated May 18, 1939, so that American Airlines will not be authorized to transport mail on the additional schedules proposed to be inaugurated by it effective June 1; that pending the review of such order by the Authority and the determination thereof, the Authority postpone the effective date of such order; that pursuant to section 411 of the Civil

Aeronautics Act, the Authority investigate and determine that American Airlines has been and is engaged in and proposes to engage in unfair and deceptive practices and unfair methods of competition in air transportation as described herein and order American to cease and desist from such practices and methods of competition, and for such other and further relief as the Authority may deem proper." Eastern's protest said.

Eastern's Newark-Washington mail, passenger and express operations have always "fully and efficiently" served the needs of the public, the protest said, adding that the company has been and will be adversely affected by additional American Airlines schedules. "The mail compensation of the applicant has been adversely affected by the authorization of the Postmaster General permitting American to transport mail on additional schedules which it has inaugurated between Newark and Washington and such compensation will be further adversely affected if the order of the Postmaster General authorizing American to transport mail on two additional round trip schedules between Newark and Washington is permitted to become effective," Eastern stated. The two American schedules in question are parts of Newark-Chicago trips.

Pan Am. Receives Trans-Atlantic Certificate; 2 Trips Weekly Allowed

Pan American Airways on May 19 received from the CAA a certificate of convenience and necessity authorizing operations between New York and London over a northern route via Sheddac, New Brunswick, Botwood, Newfoundland and Foynes, and over a southern route from New York via the Azores and Lisbon to Marseilles or London.

Pan Am is given permission to use Baltimore as the U. S. terminal when weather conditions make it impossible to operate in and out of New York. In following the southern route, a stop may be made at Hamilton, Bermuda, if and when weather conditions require. PAA is prohibited from carrying mail, passengers or express between points in the U. S.

Significant points in the certificate are that it authorizes only two round trips weekly and states that a minimum of five mail-express round trips must be flown over the southern route before passengers may be carried. The number of trips "will only be increased as the development of the business and the demands of the public interest shall require," the Authority stated. Throughout the 12-day hearing on the application, Pan Am maintained that it has always planned four trips weekly. Important also is the fact that the Authority, recognizing that trans-Atlantic flights are dependent upon weather conditions, states that the carrier may commence a trip on one route, change course, and complete it on another route. How this will effect mail pay is not known at this time.

The opinion of the Authority points out that the total number of weekly frequencies on which landing rights in Europe, exclusive of Portugal, may be utilized by U. S. carriers under existing international agreements is six, and that all the landing rights are in the name of and under the control of the U. S. government. It would not be in the public interest at this time, the CAA stated, to grant to a single company more than two of the six landing rights until possibilities of the potential trans-Atlantic traffic are fur-

ther developed. Any competition which might be necessary to assure the sound development of an air transport system probably would be impossible of attainment if all landing rights were granted to one carrier, it added.

"The certificate therefore should provide that the applicant may utilize two landing rights in the United Kingdom of Great Britain and Northern Ireland . . . or two of the landing rights provided for in France or one landing right per week each in England and in France," the opinion said. The Authority also recognized that landing rights held by the U. S. may be decreased or increased in the future, and therefore inserted a condition in the certificate to the effect that the right of Pan Am to utilize such landing rights "shall be subject (1) to the provisions of the respective international agreements under which such landing rights are provided and (2) to the requirements of the public interest; and the Authority to the extent which it may find the public interest to require may, from time to time, after notice and hearing, reduce or increase the number of frequencies on which the holder hereof may utilize such landing rights in the United Kingdom of Great Britain and Northern Ireland or in France." The certificate was approved by President Roosevelt.

Sales Records Broken

A 73% increase in April sales over the same month in 1938, setting a new world's record for production of commercial aircraft, has been announced by Piper Aircraft Corp., Lock Haven, Pa., only to report again that the record was broken in May. On May 16, the company announced 101 Cubs sold and delivered, twice as much business in the first two weeks as for all of May, 1938. A backlog of nearly 200 orders with double shifts employed and a payroll of approximately 400 also is reported.

CAA Employes Form Club, Credit Union

Formation of a club and credit union for employes of the Civil Aeronautics Authority was announced following a meeting of 300 workers on Apr. 19. The first meeting was presided over by Paul J. Frizzell, CAA coordinator and secretary.

Officers are as follows: Alvin O. Preil, assistant chief of the airways engineering division, president; Edgar R. Ryan, chief of the purchase and property section, vice president in charge of cooperative activities; Jack Grey, acting chief of aircraft airworthiness section, vice president in charge of educational activities; Francis Brown, examiner, vice president in charge of athletics; Pat O'Malley, chief of the editorial section, vice president in charge of social activities; Jean Clark, secretary to Vice Chairman Harilee Branch, recording secretary; A. J. Naylor, director of budget and finance division, treasurer. Directors are Clark Edgerton, chief of analysis section of private flying division; Jesse Lankford, chief of analysis section, Air Safety Board, and Cletus Estep, chief of the office service division.

The credit union has been set up to enable CAA employes to secure small loans at very low interest rates. Membership in the union is possible through purchase of a \$5 share, or paying 25¢ toward a share. Members can secure loans up to \$25 without security and up to \$100 with security. These amounts are to be raised later. Interest on the loan is 1% per month on the unpaid balance.

Officers of the credit union are W. F. McBride, chief of the radio section of the airways engineering division, president; Mabel Cuddy, secretary to Air Safety Board member Tom Hardin, vice president and clerk, and George Zuch, chief clerk of the radio section, treasurer. Directors are Julia Hevener, acting chief of the certificate section; Mabel Cuddy; Nancy Harfield, planning and procedure division; George Zuch; Kenneth Haagenson, aircraft airworthiness section; Stafford Kernan, chief of the statistical section, and W. F. McBride. The supervisory committee is composed of A. H. Gilbert, chief of the analysis and research section; C. M. McGinnis, assistant chief of the budget and statistical section, and Francis Brown, examiner. The credit commission, which approves all loans, consists of J. F. Warlick, assistant chief of the certificate and inspection division; Christine Fox, mail control; and James M. Farrar, chief of the project section.

SPEEDS TO RECORD

Sarabia Cuts Time from Mexico City to New York in 10-hr. 47-min. Flight

In reciprocation for the recent goodwill inaugural flight to Mexico City made by Capt. E. V. Rickenbacker, president and general manager of Eastern Air Lines, with 32 guests, Francisco Sarabia, Mexican speed flyer, on May 24 established a new time record Mexico City-New York when he flew his Gee Bee special to Floyd Bennett Field after a 10 hr. 47 min. flight. Distance covered was 2,350 mi., and the record broke that made by the late Amelia Earhart on May 8, 1935—14 hrs. 19 min.

The racing plane was powered by a 650-hp. Pratt and Whitney Hornet. Sarabia took off with 525 gal. of gasoline and ended with one gallon at the Brooklyn field. At the flight's conclusion, the pilot said: "It was one of the toughest flights I've ever made. I had headwinds of about 50 miles an hour all the way and I went through two thunderstorms. I flew at about 16,000 feet." Sarabia later was taken on an aerial inspection flight of Manhattan and environs aboard an EAL plane as Capt. Rickenbacker's guest.



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AMERICAN AVIATION

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Fortnightly Review

(Continued from page 1)

not obligated, except perhaps morally, to place air mail on routes unless it deems such routes suitable. In other words, the Post Office Department is the key to air mail, and air mail is vitally essential to an airline at this stage of air transport development.

But this by no means ends the matter. The Post Office Department is limited in its decisions by appropriations on hand and, again contrary to certain opinions which have been expressed in air transport circles, the Post Office Department cannot—or at least will not—place mail on routes until appropriations actually have been made to cover payments to operators. The PO cannot place mail on a route and then go to Congress to collect, although it does have fairly liberal leeway for independent action with other types of mail which Congress has specifically authorized must be moved for the benefit of the public.

In the final analysis, therefore, the problem of expansion rests with Congress. The CAA can select the operator and the route on the basis of public convenience and necessity, the Post Office can express its wishes with regard to air mail on a route, but Congress must make the necessary money available. Aviation interests so often blame a government agency for not acting on this or that project, but, as we have consistently pointed out in these columns, the difficulty often lies with lack of money and only Congress can make that available. Aviation interests are often prone to forget likewise that government agencies can only request funds, they can't openly lobby for funds—at least without risking a sharp rebuff from a Congress jealous of its prerogatives.

The CAA apparently is expansion-minded. The Authority members have been fully cognizant of the hundreds and hundreds of petitions, letters and telegrams from civic interests throughout the nation demanding airline service. First Assistant Postmaster General Howes has stated frankly to us that his department wants expansion and will cooperate with the CAA in establishing as many new routes as possible within the limitations of appropriations. Harmony between the CAA and the Post Office is especially desirable at this time and Mr. Howes evidently is desirous of doing his share. For years he has been a staunch advocate of air transportation and he rarely makes a public address without giving air mail prominent attention.

But the final answer to expansion—Congress—has not yet been given proper attention by those interests desiring new lines. Too many members of the all-important House appropriations committee have yet only a vague idea of what air transportation is all about. Relatively few Congressmen are intelligently informed about aviation. Few of them have been told of the important part commercial air transportation can play in national defense in the training of pilots, in the building of planes, and in the development of airports and ground facilities and personnel. Few of them realize that a million dollars spent in mail

payments comes back in air mail revenue which is not only a public service but a sound business investment.

In conclusion, there is one vital problem which faces the CAA as it enters the "expansion stage." Some airlines have filed for lengthy new routes which eventually should most certainly be granted. But important decisions will have to be made as to whether new routes of the "development" type should be granted before the strengthening of existing lines is done on which there are many fine communities not now being adequately served. We believe an unfortunate tendency to overlook local service has crept into airline policies within recent years and we would be sorry to see more long haul routes established when many good intermediate cities on existing routes are still lacking service. In the meantime there are a score of worthwhile routes and several prospective new operators who deserve to be heard.

"I'm From Missouri"—Oh yeah?

TO BENNETT CHAMP CLARK, the Democratic Senator from the Sovereign State of Missouri, goes the rudderless airplane for 1939 for the silliest statement about aviation for the year. Not satisfied with stating on the floor of the Senate a few months ago that the Civil Aeronautics Authority has more employees than all the airlines it regulates, the Senator chose to repeat the fantastic statement in a talk before the Brooklyn Chamber of Commerce May 22. The CAA has about 3,600 employees. Does Senator Clark think that there are less than 3,600 employees of all of the airlines in the U. S.? If he does, he should wake up. We haven't the current employment figure at hand, but the airlines have at least four times as many employees as the CAA and regulating airlines is not by any means all that the CAA has to do. The Senator likes to compare the CAA with the Interstate Commerce Commission but here again he slips badly. The ICC only deals with economic regulation and certain safety matters. If the ICC were to be compared with the CAA, the former agency would have to have a man in every signal tower on every railroad in the country and provide all the track maintenance as well. At least 2,600 of the CAA's employees are concerned exclusively with the maintenance and operation of the federal airways which are open for use to all flyers, military, private and commercial, and have no connection with airline regulation. It is a sorry sight to see a man in the highest legislative body in this country make such ludicrous and erroneous statements as the Senator from Missouri has chosen to do on at least two occasions.

The Myth of "Official Release"

AL WILLIAMS frequently has pointed out in his newspaper column that there is no such thing as an aeronautical secret and that every important world power keeps itself well informed about what's going on in this country. Our own experience has been that there is an undue amount of worry over the publishing of certain factual aeronautical information in this country. This worry is exercised both by the War and Navy Departments and by the industry. The net result of attempts at secrecy about aircraft and engines is that the data is usually published in Europe long before it sees the light of day in this country. The ritual of secrecy is practiced to such an extent that the War Dept. even has been known to hold up information as confidential that has been widely printed abroad and reprinted over here.

Recently we have been intrigued by the publication of photographs and performance data on U. S. airplanes in European aviation magazines before the material was "officially" released by the manufacturers. For example *Flight* and the chronically inaccurate *Aeroplane*, both British papers, published photographs of the Stinson 105 in their issues of April 19, whereas the American aeronautical publications did not receive the photos and data until that date for publication in their May issues. Consequently, the Stinson 105 news was available through these British publications in this country before any U. S. paper had had a chance to get off the press.

In *Les Ailes*, the very newsy French aviation paper for April 27, appear not only two excellent photos of the new Fairchild trainer but rather complete data as well. We have not asked the Fairchild company for this material so it may be unfair to assume that it was withholding the information until later release, but the fact remains that except for our own photo published in the May 15 issue, there has been no data on the Fairchild trainer published in this country.

Another illustration is the Bellanca Junior, a trainer which has been testing for some time. The Bellanca company is withholding all data and photos until an ATC is obtained. Yet both British publications have carried rather complete information about the ship.

Manufacturers of transport airplanes also are in this category. Official company information simply is not obtainable and yet every airline official

in the country is bombarded with advance announcements and specifications and the ship is the subject of every-day conversation. We have never believed the story of the ostrich burying his head in the sand but the illustration is very apt regardless of its veracity.

We believe U. S. aviation trade publications have a legitimate complaint against the mockery of official secrecy. When a manufacturer's export or sales department sends out information by the carloads about a new ship, this constitutes an official release of information and the manufacturers should be appreciative enough of the great amount of free publicity given by U. S. publications for airplanes to protect them from being anywhere from a month to six months behind foreign aviation magazines. We can understand why a company wishes to withhold data until an Approved Type Certificate is obtained, but the company should then hold up any information to dealers, exporters and foreign representatives. We should point out in all fairness to the three companies mentioned above that they were singled out only because information on their ships appeared in foreign publications in April. The same thing has happened with regard to many other concerns in the past.

Think Nothing of It, My Friends

HERE IS a story to test the credulity of anyone who doesn't know what a handicap the Civil Air Regulations are to the hardy soul who insists on flying regardless of red tape. On May 21 at Ann Arbor, Michigan, there was an Aviation on Parade affair at the local airport to climax the private flying sessions of the local University of Michigan chapter of the Institute of the Aeronautical Sciences. Proudest of all the collegiate aviation enthusiasts was Ed Martin, president of the National Intercollegiate Flying Clubs. Mr. Martin owns his own airplane, he likes to fly, he looked forward to joining his friends in demonstration flights and participating in the big day. But Mr. Martin's airplane remained in the hangar. Why? Well, folks, it's this way. A few weeks previously a CAA inspector suggested that a minor repair be made on the plane. Mr. Martin complied immediately. But the inspector couldn't get back to Ann Arbor for awhile so the plane had to sit in the hangar on the day of days because no official was around to take a look at it. Of course Mr. Martin could have flown it to the Detroit CAA office, but he had other things to do and anyway, if the plane was okay to fly to Detroit to be inspected, why bother about an inspection?

Now here's another little story. The writer of this little opus has an automobile. The tail light went on the bum and the inspector from the Federal Automobile Authority came around and said it would have to be fixed before the car could be taken out of the garage. Well, folks, the tail light was fixed within an hour but the inspector moved on to another town and was due back in another month or two. So the writer just had to postpone his trip into the mountains to wait for that inspector to come around and see that the tail light was in working order. You smile, good friends, you smile. But where would the automobile industry be today if federal inspectors had to approve every little repair, every little change? And how is private flying ever going to grow if every airplane has to be closely inspected by a Federal agent for every little detail and officially approved before it can take off. We didn't go to the Ann Arbor affair so we don't know how Mr. Martin feels about things in general. But if Mr. Martin decides to forget flying and stick to his automobile, he'll be doing only what others have done before him, that is, those who aren't able to make a full time profession out of private flying.

Pro, Con and Otherwise

Wants Credit Cards

May 9, 1939

To the Editor:

I have just noticed that the CAA is "investigating" airline scrip and credit card plans. I am assuming that this has been prompted by some agitation on someone's part to have this abandoned.

As a credit card holder I would like to go on record as being opposed to the discontinuation of credit card travel since I have occasion to fly a couple of thousand miles a month and can appreciate the convenience of this. Then too it is entirely possible that the 15% discount will be the difference between justifying air travel as against air travel.

GEORGE MASON

J. Walter Thompson Co., Chicago

TCA PLANS 'LOOPS'

Minister of Transport Announces
Proposal to Link Province
Centers With Stem

Montreal, Que.—Provincial "loops" to connect important centers of each province with the main line of Trans-Canada Air Lines will be established in the near future. It has been announced by C. D. Howe, minister of transport. The work would be proceeded with this summer, along with the establishment of connections with U. S. airlines at Detroit and Buffalo.

Today, he said, the air route traced by the defense department in 1928, has 90 airports with runways able to accommodate the largest craft. The minister pointed out that the fields were so laid out that they could be expanded in the future, a feature which 85% of those in the U. S. lacked. The 4,000-ft. runways also will meet future needs, it is felt. TCA now possesses 30 powerful beam ranges. Personnel is about 420, including pilots, some of whom had 5,000 hours before being engaged.

Aero Library

LIGHTPLANE FLYING. By Wolfgang Langewiesche. Pitman Publishing Corporation, New York, New York. \$2.50.

Why hasn't somebody told me these things? Perhaps they're not true. I'd better try them. (Two days later) They are true and so I'd better tell what I've learned. First, this is a book that is of interest primarily to student pilots and hence misses its mission, i.e. "to arouse enthusiasm." The student pilot must already have enthusiasm or he would not be spending valuable time and money on instruction. On the other hand, *Lightplane Flying* is not "a course of instruction" according to the publisher. If it is not a book to enthuse the nonflyer, or a book of instruction on how to fly, what purpose can it serve? The answer might well be: It can serve as collateral reading to supplement the standard text on how to fly and the well known inarticulate characteristics of even the best instructors.

As a matter of fact, there are innumerable statements contained in the book that should be very valuable indeed to the student and lightplane pilot—facts that are not to be found in any other book. But to find these helpful pointers, one must unfortunately wade through page after page of eulogy for lightplane flying which might better have been made a sales booklet for wide distribution to non-flyers leaving the balance to be published as an inexpensive supplement to a text book.

Several statements in the book seem to need some qualification. For example, the author says in explanation of Chapter I "Flying is now possible for the average citizen because of a new type of airplane which is economical, easy to handle and safe." Even in my enthusiasm for aviation, I must say "relative to what?" and again, "an airplane flies itself and the pilot need merely guide it." (Take this letter please to my instructor, George Brinkhoff, College Park Airport, College Park, Maryland. Dear George: Why didn't you tell me this before I took lessons? Please return the hard earned money I paid you for instruction and all will be forgiven.) One suspects on reading this kind of statement that credit given in the foreword to the public relation directors of the manufacturers of "Cub" and "Aeroncas" for the illustrations used, applies perhaps to words as well as to pictures.

Lightplane Flying is interesting and easy to read but it will never be a best seller at \$2.50.

CORRINGTON GILL

United's Execs Meet

Sales executives of United Air Lines convened recently at Chicago for a two-day meeting of the traffic plan board to lay summer merchandising plans. Meeting, under the supervision of Director of Sales B. B. Gragg, was attended by W. A. Patterson, pres.; Harold Crary, v. p.; Traffic Manager R. W. Ireland; Advertising Director Bob Johnson; Regional Traffic Managers S. A. Stimpson, San Francisco, H. J. Merchant, LA, R. F. Ahrens, Chicago, and John B. Walker, NY; Donald Magarrell, director of passenger service; Reservations Manager Jim Rauen, and representatives of N. W. Ayer & Son, United's ad agency.

T-Type Hangars Available

Announcement of the details of construction of new T-type multiple hangars has been made by Edwards Iron Works, South Bend, Ind. They are available in single or multiple units.

Obituaries

A. R. C. KURTZ, licensed pilot and operator of the Roosevelt Field Hotel and Restaurant, Mineola, N. Y., for the last five years, died on May 4.

J. GRANT MacDONALD, 35, veteran test pilot, died at Los Angeles on May 17 when he left his plane in a parachute at 500 ft.

WILLIAM E. SAVAGE, 49, of Dayton, O., civilian aeronautical engineer at Wright Field, died May 9. He recently had won a national award for developments in arc welding and had supervised the designing and construction of a stainless steel wing. He also was instrumental in perfecting two aluminum alloy wings.

COL. CHARLES de FOREST CHANDLER, 60, retired chief of the balloon section of the Army Air Service in France during the war, died May 17 in Washington, D. C. He was the first head of the aeronautical div. of the Signal Corps, and in 1911 was placed in command of the Army's experimental air school in College Park, Md. He was a member of the NAA and the IAE.

GLEN RIDDELL, 42, air safety investigator for the Air Safety Board, died of heart attack in San Francisco on May 16. He was stationed at Oakland, Cal., and was attached to the Santa Monica division office of the board. A former airline pilot and Army man, he passed an Army flight test examination on Apr. 29.

Fafnir Bearings

Fafnir Bearing Co. of New Britain, Conn., has announced a new series of aircraft bearings of a needle roller design adapted to applications involving high loads at the same time keeping the bearing diameter to a minimum. The new series has a self-contained inner race and they are prepacked at the factory with sufficient grease to last the life of the plane, the announcement says.

Colorado Playgrounds

will be more convenient
for Eastern vacationists
on—

JULY 1st

when Continental's
Wichita-Colorado
Springs-Denver route
will start passenger ser-
vice.



World's Fastest-Scheduled
Airline

THE C.A.A. RECORD

(Applications, Hearings, Dockets)

CERTIFICATES ISSUED

American Gets Certificates

American Airlines on May 15 received from the CAA certificates of convenience and necessity for the carriage of mail, passengers and express on the following routes: AM4, Dallas-Los Angeles; AM7, Newark-Chicago; AM18, Boston-Newark; AM21, Boston-Cleveland; AM22, Cleveland-Nashville; AM23, Newark-Ft. Worth, Albany-Newark; AM25, Washington-Chicago, and AM30, Chicago-Ft. Worth. The company did not receive a certificate for a Newark-Lakehurst operation. The CAA stated that when American operated this service in 1936 it did not have a contract with the Post Office and was merely acting as the agent of Deutsche Zeppelin Reederei.

United Gets Certificates, Except AM12

United Air Lines has been granted mail, passenger and express certificates on the following routes: AM1, Newark-San Francisco; AM11, Seattle-San Diego and AM17, Cheyenne-Denver. A passenger-property certificate was awarded UAL for Seattle-Vancouver. The company did not, however, receive a certificate for AM12, Salt Lake City-Salt Lake-Spokane, the Authority stating that it was reserving the matter "for future decision." Reason for this, it is learned, is because AM12, like Braniff's AM15, is a "Y" route, and it is believed that the Authority will issue all decisions on such routes at the same time.

APPLICATIONS

American Export's Application

American Export Airlines has filed application with the CAA for permission to conduct mail and express service between New York and Marseilles. Complete story on page 23.

Mid-Continent Amends Application

Mid-Continent Airlines has amended its application for a Twin Cities-St. Louis route to include stops at Ottumwa, Ia., and Quincy, Ill.

Kluzek Withdraws Application

Order, serial No. S2. Granting Stanley Kluzek, Springfield, Ill., pilot, permission to withdraw his original application for permission to make a goodwill flight from Springfield, Ill., to Warsaw, Poland.

Canadian Colonial Asks Approval

Canadian Colonial Airways has filed application with the CAA for approval of certain interlocking directorates involving C. Coburn Darling.

Penn-Central Asks New Routes

Pennsylvania-Central Airlines on May 19 filed applications with the CAA for two new routes and two extensions. Complete story on page 23.

Continental Interlocking Directorate

Continental Air Lines on May 19 filed application for approval of an interlocking directorate involving Lawrence C. Ames, who owns 37 shares of CAL common stock out of 500 shares issued and outstanding, and who has made application to purchase 255 additional shares to be issued under the company's recapitalization program. Ames also owns 6,500 common shares of Lockheed Aircraft Corp. out of 660,897 issued and outstanding. He is a partner in Irving Lundborg & Co., members of the San Francisco Stock Exchange.

EAL Protests New N. Y.-Washington Credit Trips

Eastern Air Lines on May 27 filed a protest with the CAA regarding the intention of American Airlines to add two new daily Newark-Washington round trips on June 1, stating that carriage of weight-credit mail on such flights would adversely affect Eastern. Complete story on page 18.

HEARINGS

Continental Rate Hearing

Hearing was held May 15-17 at the Carlton Hotel, Washington, before CAA Examiner C. Edward Leasure on the application of Continental Air Lines for the setting of 39c per mile as the fair and reasonable rate for the transportation of

CAA Record Recapitulation

Certificates to be Issued	Certificates Issued	Rate Applications Filed	Rate Cases Heard	Rate Cases to be Heard	Rate Decisions Issued
Marquette	Delta 2/26	Braniff 10/20/38	MCA 12/28-29		
TWA	Mid-Continent 3/7	Mid-Continent 10/22/38	Inland 1/10-11		
Braniff Eastern	Continental 3/9 Northwest 3/14	United 10/27/38	National 1/19-20		
Pan Am (Bermuda)	National 3/14	Western Air 10/27/38	Northwest 1/24		
Inter-Island	Chi. & South. 3/21	Penn-Central 10/27/38	Braniff 2/7		
Pacific-Alaska	Inland 3/29	Pan Am (Pacific) 10/29/38	Pan Am (Pacific) 2/14-18; 2/27-28		
Airline Feeder	Western Air 4/8	Inland 11/19/38	Western Air 2/23-24		
Boston-Maine	Penn-Central 4/29	Pan Am (Bermuda) 11/19/38	Penn-Central 3/9-10		
Canadian Colonial	American 5/15	Northwest 11/22/38	Pan Am (Atlantic) 4/10-22		
United (AM12)	Pan Am (Atlantic) 5/19	National 11/22/38	Pan Am (Bermuda) 4/10-22		
	United (All Except AM12)	TWA 1/24/39	United 4/24-28		
		Pan Am (Atlantic) 3/13/39	Boston-Maine 5/8		
		American 3/14/39	Continental 5/15-17		
		Boston-Maine 4/7/39			
		Continental 4/29/39			

mail over AM43, Wichita-Pueblo. The company asks that the rate apply on 100 lbs. of mail, or fraction thereof, with a 2.5% increase for each additional 25 lbs. AM43 is a new route provided for in section 401 (e) (2) (A) of the Civil Aeronautics Act. Continental also operates AM29, Denver-El Paso.

Robert Six, president of the company, testified that Continental operates as economically per-mile as any U. S. carrier, adding that the present rate of 33 1/3c per mile on AM29 is fair and reasonable when coupled with 39c on AM43, and with the present equipment operated. Payment of 39c on AM43 is necessary to enable the company to operate economically, he said. The original application on AM43 stated that Continental was willing to carry the mail for 33 1/3c, but Six explained that the company merely put in the highest possible bid under the old Air Mail Act of 1934. Continental needs a minimum cash balance of \$60,000 at all times, he said. Discussing the 100-lb. provision, Six stated that such an arrangement would be an incentive to the carrier to build up the mail business in its territory, adding that it was "a business opportunity." The highest average mail load ever attained on AM29 was 38 lbs. Continental recently put a Lockheed 10-E into operation on AM29, Six said, explaining that the ship differs from an Electra in that it has two 600-hp. engines (500 hp. for cruising) and a 10,300-ft. single-engine ceiling.

Testimony also was given by R. H. Purcell, certified public accountant, connected with the firm of Thurston & Grider, El Paso, and R. H. Herrnstein, Continental's general traffic manager. Purcell stated that the authorized capital of Continental is now \$500,000 (50,000 shares, \$10 par) and that the net worth of the company was \$214,978.79 on Mar. 31, last. The authorization of a second schedule on Feb. 15, 1938, has enabled CAL to show a profit since that date, he said. From July 1, 1938, to Mar. 31, 1939, this profit amounted to 5.04c per mile. Purcell stated, adding that for the fiscal year ending June 30, 1939, the company will show operating revenues of 42.68c per mile against expenses of 38.14c (last three months estimated).

AM43, during the fiscal year ending June 30, 1940, will show operating revenues of \$129,972.09 against expenses of \$129,247.90, or a profit of \$724.19. Purcell estimates. This does not include \$3,799.83 preliminary costs prior to establishment of passenger service. These costs should be allowed as an operating expense, Purcell said. Stock sale of 2,500 shares at \$25 per share is expected to raise the company's net worth by \$62,500, he said. Of these 2,500 shares, 1,715 have been subscribed for and the money sent in. Herrnstein discussed the traffic problems in connection with AM43. Witnesses presented by the government included W. J. MacKenzie, of the CAA's certificate and inspection division, and J. C. Brawner, of the analysis and accounts division.

Jack Wynne handled the case for Continental and Whiting Willauer represented the CAA in a legal capacity. No briefs are to be filed prior to the examiner's report and a quick decision is expected on the case.

ORDERS, REGULATIONS

Transportation of CAA Personnel

Amendment No. 2 to Regulation 605-B-1. Access to aircraft by duly qualified air carrier inspectors, airway traffic control managers and communications supervisors of the CAA. The regulation is amended by adding a new section (d) as follows: "Any air carrier may carry without charge on any aircraft which it operates, any airway traffic control manager or assistant manager or any communications supervisor or assistant communications supervisor of the Authority (including supervising officers of such persons), for the purpose of more fully and adequately acquainting such persons with the problems affecting airway traffic control and communications. Provided, however, that no such person shall be carried without charge on a round trip by any air carrier for such purpose more often than once in each year."

New CAA Rules of Practice

The CAA has issued a complete new set of rules of practice under title IV and section 1002 (d) to (1) of the Civil Aeronautics Act. The new rules include all amendments made from time to time together with a few minor changes, and explain the procedure to be followed at hearings and oral argument before the Authority.

Calendar of Hearings

May 31—National Airlines, Eastern Air Lines, new routes in Florida.
June 1—Pan American Airways, oral argument on application for increased trans-Pacific mail pay.

June 5—Northwest Airlines, Milwaukee-Twin Cities and Milwaukee-Marquette routes.

June 7—Pan American Airways, Panama Airways (PAA), Uraba, Medellin & Central Airways (PAA), certificates of convenience and necessity.

June 12—Mid-Continent Airlines, Northwest Airlines and Braniff Airways, on the following respective routes: Minneapolis-Kansas City, Minneapolis-Kansas City and Rochester, Minn.-St. Louis.

June 14—Pan American-Grace Airways, certificates of convenience and necessity.

June 19—Western Air Express, Great Falls-Lethbridge extension.

Price List & Guide Issued

A new guide and price list for aircraft sheet metal products, catalog No. 13, has been issued by Engel Aircraft Specialties, Escondido, Cal.

THE CHIEF-LINE OF THE MID-CONTINENT AREA



American Export Airlines Asks Trans-Atlantic Mail-Express Route

Will Apply to CAA for Passenger Permit on New York-Marseilles Line When Suitable Equipment Is Available

American Export Airlines' trans-Atlantic application, filed with the CAA on May 10 (AMERICAN AVIATION, May 15), requests a certificate of convenience and necessity for carriage of mail and property over the following routes: (summer) New York to Marseilles, either direct or via Botwood, Foyes and Biscarrosse; (winter) New York to Marseilles, either direct or via Horta, Lisbon and Biscarrosse.

Any or all intermediate points, winter or summer, will be omitted when weather permits, the application stated, adding that when New York cannot be used because of ice, the U. S. terminal will be Baltimore or Charleston. Operations will commence approximately six months after issuance of a certificate. Tentative schedules show departures from New York on Wednesdays and Saturdays, arrivals in Marseilles Thursdays and Sundays, with the trip taking approximately a day longer in winter. Westbound (summer), trips will leave Marseilles Sundays and Wednesdays, arriving in New York Mondays and Thursdays. These flights also will take a day longer in winter.

Export has contracted to purchase a twin-engined Consolidated flying boat, and plans to start survey flights with the ship in June. The company states that it has been conducting trans-Atlantic survey and research studies for the last 2½ years.

"The applicant has been informed by reliable manufacturers that, within three years from the date of this application, long-range aircraft of a type or types not now available may be expected to become available and to be suitable for use by applicant in the non-stop trans-Atlantic carriage of passengers," the application says. "Applicant intends, if this expectation is realized, to apply for authorization to carry passengers, as well as property and mail, over a non-stop route between the U. S. and France." Another portion of the application states that "applicant is now engaged in investigating types of aircraft already developed and built which will perform the service over the routes indicated with reasonable payload and adequate reserves. Applicant is now negotiating with the manufacturers of two of these aircraft and will present to the Authority in advance of the hearing on this application the specifications and performance data of the aircraft selected."

During the first three years of operations, Export expects the following losses, excluding compensation received for U. S. mail, after depreciation and taxes, but before interest: \$2,065,000, \$2,203,000 and \$2,108,000, respectively. Prospective changes in equipment make estimates for the fourth and fifth years "too conjectural," the company stated. The following mail (lbs.) is expected during the first five years: 61,500, 136,000, 177,500, 220,000 and 275,000, respectively, while express will be 30,000, 68,000, 100,000, 140,000 and 200,000. Revenue from express will be \$37,500, \$85,000, \$125,000, \$175,000 and \$250,000.

Export proposes to establish at New York its own meteorological station for taking and accumulating weather observations, including weather and upper-air observations reported by the steamships of American Export Lines while at sea. "Applicant has also arranged with the U. S. Weather Bureau and with American Export Lines to have four daily upper-air soundings taken on certain American Export steamships," the application stated. "Data so obtained will be transmitted to the Weather Bureau by radio," it added.

"Along the route from New York to Biscarrosse, either direct or via Horta and Lisbon, applicant expects to be in

constant radio communication with steamships of American Export Lines," the company states. "From five to eight such ships are normally at sea along the route between N Y and Gibraltar. Applicant is arranging with American Export Lines to provide certain of the ships of that line with special equipment for taking upper-air and surface weather observations and to train the appropriate personnel of the ships in the use thereof. Applicant expects that all the Export ships will furnish constant meteorological information, as well as radio bearings, and will render all possible assistance to planes in flight.

A station manager is now located in Horta and representatives are in Lisbon and Marseilles, the application reveals. Another representative will be stationed at Biscarrosse prior to commencement of survey flights. Day, visual, contact, instrument and over-the-top operations will be conducted over all the route, and night flying on certain portions.

Export states that \$2,600,000 additional money will be required by the company, which on Apr. 30, 1939, showed total assets of \$405,787.67. This

Five TWA Directors Resign; Conroy Is Elected Vice Pres.

Reorganization of the board of directors of Transcontinental & Western Air Inc., was completed May 19, with acceptance of the resignation of five members of the board of directors and the election of Vincent P. Conroy, general traffic manager, as vice-president in charge of traffic and sales. No new members of the board were elected.

Those who resigned were John D. Hertz, Sr., John D. Hertz, Jr., Harold Talbot, John Ritchie and Marco Hellman, all associated with the Lehman group whose stock was purchased in April by a group headed by Jack Frye, president, and Paul Richter, executive vice-president. As revealed recently, Howard Hughes, noted sportsman pilot and multi-millionaire, provided the funds for the purchase of the Lehman group stock.

Conroy joined TWA just a year ago as sales manager. During the last 12 years he has served as traffic manager for National Air Transport in Kansas City and New York, and also with United Air Lines and Eastern Air Lines as traffic manager in New York City.

It is learned that the CAA has informed Export that when its Consolidated flying boat has passed all necessary CAA tests, it may make three survey flights which shall not carry passengers, mail or goods.

Penn-Central Asks Two New Lines, Extensions of Two Existing Routes

Applications for permission to carry mail, passengers and express over new routes and extensions totaling 1,506 miles were received May 19 by the CAA from Pennsylvania-Central Air Lines.

One new route applied for is between Pittsburgh and Birmingham with a branch line from Knoxville to Atlanta. Intermediate stops on this route will be Charleston, W. Va., Knoxville and Chattanooga. The other new line requested is between Norfolk and Knoxville via Elizabeth City, Rocky Mount, Raleigh, Greensboro, Winston-Salem, Hickory and Asheville. Penn-Central asks an extension of AM41 (Detroit-Sault Ste. Marie) from Grand Rapids to Traverse City, and an extension of AM34 (Washington-Buffalo) from Baltimore to Atlantic City.

Concerning the Pittsburgh-Atlanta-Birmingham route, PCA's application points out that the company has flown part of the route between Pittsburgh and Charleston, from Apr. 7 to Oct. 23, 1937, and discontinued service because of inadequate air navigation facilities. The company is prepared and equipped to conduct all survey and qualification flights required by the CAA, the application states. Visual, contact daylight operations will be conducted over the line at first. Operating losses, not including estimates of mail revenues, for the first five years are expected as follows: \$197,396, \$181,868, \$149,943, \$109,568 and \$67,853, respectively. These losses, the company states, are subject to increase

to the extent that administrative and general operating expenses of the applicant are, or become, allocable to such route, and are further subject to reduction or elimination to the extent that air mail pay is authorized for the transportation of mail on such route.

The Knoxville-Norfolk route will lose \$137,621, \$130,220, \$115,760, \$96,250 and \$71,901, respectively, during the first five years, not including mail revenues. Two round trips daily are planned and operations will be day, visual contact to start.

The Grand Rapids-Traverse City extension is intended to connect with "applicant's present services being operated between Detroit and Sault Ste. Marie and between Detroit, Milwaukee and Chicago." Day, visual contact operations are planned until permission is granted for night, over-the-top or instrument flights.

PCA's present services between Washington and Buffalo and Pittsburgh and Baltimore will be connected by the Baltimore-Atlantic City extension, the application states. One round trip a day, visual contact operation, is planned. Because the last two lines are extensions of existing routes, no estimated losses are given.

Largest Building Claimed

United Air Lines' new two-story airport headquarters building at Chicago with its 37,500 sq. ft., is said by company officials to be the largest "exclusively aviation" headquarters building in the U. S.



offers the

MOST

**CONVENIENT
NON-STOPS**

**CHICAGO—
NEW YORK**

NEW

4:00 p. m.

DEPARTURE

and

5:30 p. m.

DEPARTURE

from both cities

TWA originated NON-STOP air service between New York and Chicago five years ago—back in 1934. Effective June 1st TWA inaugurates the most convenient NON-STOP service with departures at 4:00 p. m. and 5:30 p. m. from both Chicago and New York.

3 HOURS 55 minutes is TWA's NON-STOP flying time Chicago to New York. There's nothing faster, nothing finer! 8 fast schedules a day each way. Service when you want it, on giant Douglas luxury Skyliners. TWA's the way!

**NONE FINER
NONE FASTER**

Call your travel agent or

TRANSCONTINENTAL &
WESTERN AIR, INC.



THE ROUTE OVER

The Sunny Santa Fe Trail

Airline Personnel

Wayne George has been appointed district traffic mgr. for South Dakota by Inland with headquarters in Rapid City. He was traffic mgr. for Rapid Air Lines when it operated in S. D. and since has been secretary of the Belle Fourche chamber of commerce.

First officers who have completed training for American in Chicago have been assigned to regular schedules at base stations. Assigned to Newark are N. R. Wells, R. M. Nielsen, E. C. Watkins, N. H. Sandlin, E. T. Buse, J. D. Henry, S. P. Saint and F. A. Allen. At Chicago are J. M. Jones, C. A. Lippincott, V. H. Mayfield, C. R. Sisto and M. M. McGuire.

Roger Flynn, former Portland, Me. station mgr. for Boston-Maine, has been promoted to ast. flight supt. at Boston.

In charge of Continental's new Denver city ticket office is John Brock, d.t.m., who joined the line and the industry on Feb. 1. He formerly was ast. auditor of Colorado National Bank and has experience in publicity and sales work. His assistant in the office is Frieda Milstein.

Robert Stevens, agent at Bangor for Boston-Maine, has been transferred to Augusta in the same capacity.

John Templeton, American first officer, formerly based in Memphis, has been transferred to Ft. Worth. W. W. Ashley, first officer, formerly at Boston, has been transferred to Memphis.

American stewardess Kathleen Regan has been transferred from Chicago to Newark.

Boston-Maine's agent at Bangor, Gerald Swan, has been promoted to station mgr. at Waterville.

Emera Kingsburg of Wellesley, Mass. has joined Boston-Maine's staff at Bangor as ticket agent.

Recent graduates of E. K. Smith's Air Traffic School, Allan Keith Lyman and Henry E. Brandli, Jr., have been employed in American's reservation dept.

R. W. Fischer, who has been assigned to the office of supervisor of stations for American, has been appointed ast. supervisor of stations. Paul Medland, AA's Baltimore station mgr., has been transferred to the office of supervisor of stations as a replacement for Mr. Fischer. S. F. Redfield, form-

erly an AA agent at Syracuse, has been appointed Baltimore station mgr. Chicago and Southern has announced that W. G. Gabehart, station mgr. at Springfield, Ill., has been transferred to Memphis to assume similar duties of H. L. McCune who has resigned.

Agnes Rebman of Torrington, Conn., graduate of St. Francis's Hospital, Hartford, Conn., is a new American stewardess.

K. M. Bates, United d.t.m. at Toledo, has been transferred to the company's San Francisco office as traffic representative succeeding Warren Burk, resigned. Irma Richter is now in charge of the Toledo office.

B. T. Dykes has accepted a position as supt. of maintenance for Canadian Colonial. He formerly was general foreman of American's shops at Newark.

Elizabeth Anzuena of Glassboro, N. J. for two years a United hostess, was married on Apr. 22 to Robert Butler, United passenger agent at Cleveland.

Operator of a flying service and crop dusting company at Caribou, Me., Ernest Pretsch has accepted a position as co-pilot with TWA.

Walter S. Weismann, Jr., of New York has replaced Cecil Smith as city sales mgr. for American at Houston. Smith was transferred to Ft. Worth where he is mgr. of reservation control.

John L. Foy, United official of Akron, has been placed in charge of the line's Pittsburgh territory formerly handled by D. Walter Swan, d.t.m. in Washington.

Richard J. Bennett has been appointed chief passenger agent at NY's North Beach Airport for United. Bennett, whose home town is Washington, has been ast. chief passenger agent for UAL in Cheyenne.

Ralph Johnson, former chief test pilot for United at Cheyenne, has gone to Santa Monica, Cal. as test pilot for Douglas Aircraft Co. His place is being taken by Francis Wallace, formerly ast. test pilot, and before that a line pilot based at Salt Lake City. When Wallace moved to Cheyenne he replaced R. J. Nemmers who went with Eastern.

Appointment of Brad Gibson as Day-

ton city sales mgr. for AA has been announced.

Francis Compton, formerly employed in the office of CAA Vice Chairman Harlee Branch, has joined Eastern as a co-pilot.

A transportation agent since 1926, David Midgely has been made traffic representative for TWA in NY. He became NY's youngest passenger agent in 1934 when he was city passenger agent for the Cunard Line.

Among recent placements of graduates of Ryan School of Aeronautics with airlines are: Diar E. Clark of Des Moines, N. Y. employed by United as first officer. Walter J. McIntyre of Chicago with TWA as first officer. McIntyre, formerly with Chicago and Southern, was graduated at Ryan in 1936. Jan D. Milner of Wilcox, Ariz., formerly with Wilmington-Catalina, has accepted a position as first officer with TWA.

Mary Marshall of Brookline, Mass. has joined Boston-Maine at Boston as reservation clerk. Miss Marshall holds a private pilots license.

Latest American to join KLM's flying staff is Capt. Werner Otto Bunge who started flying in 1926 and in 1928 joined United. He has 11,930 flying hours, 2,500 of which he has flown in Douglas and Boeing aircraft. KLM employs two other American pilots.

Don Black, veteran airline publicity man, was expected to vacate his post of western director of public relations of TWA late in May.

George Steens of Newton, Mass. has replaced Roger Flynn as station mgr. for Boston-Maine at Portland, Me.

Six French-speaking stewardesses of Canadian Colonial arrived at Newark recently for instruction by their chief, F. J. Duncan. They are Madeleine Bernard, Allison Stanford, Rita McDonald, Helen Marion, Ruth McNally and Jacqueline Dussault.

The following four men who will occupy positions in the trans-Atlantic air service of PAA have gone to take up their posts: Herman Campbell, meteorologist at Lisbon, Portugal; Stanley Call, in charge of radio at Lisbon; Ralph Jackman, meteorologist at Horta, the Azores; Edward Schwartz, in charge of radio at Horta.

Arthur White of Boston, formerly with Pan American, has joined Boston-Maine as radio operator at Burlington, Vt.

Appointment of Louise E. Hill of Reading, Pa. as a United hostess has

been announced. She is a graduate of Reading Hospital.

Les Mayes, for the last four years a member of UAL's traffic dept., has been transferred to the company's advertising dept. in Chicago.

A United stewardess since 1935, Helen Huntley on May 13 became the wife of Dr. Donald R. Brumley of Cleveland. Mrs. Brumley has over 500 hrs. in the air at the controls of light planes and has flown a million miles on her job. Attendants at the wedding included Helene Dobrick, UAL stewardess, and Mrs. Marvin Whitlock, former stewardess.

Walter W. Kistler has been named manager of American's Erie, Pa. office at Port Erie Airport. Kistler recently was graduated from Parks Air College.

Walter S. Weismann, with American since Sept. 1936, has been named city sales mgr. for the line at Houston. Cecil Smith, former Houston city sales mgr., has been transferred to the Ft. Worth office.

Ruth Flikke, former ast. chief stewardess of UAL, has been made chief stewardess to supervise flying between Chicago and Denver-Cheyenne.

Marie Hess continues as chief stewardess, Chicago-NY.

AA has announced appointment of W. D. McMurray as ticket salesman at Nashville.

United Ads Clicking

United Air Lines' new advertising campaign started off with a high batting average according to Bob Johnson, the company's advertising and publicity director. The first ad in the new series, "The Nation's First Air Line," published in the Mar. 18 issue of *The Saturday Evening Post*, was ranked fourth from the standpoint of being seen and fifth from the standpoint of giving the most readership according to the Daniel Starch Report on 65 different advertisements in that particular issue. From the standpoint of the number of people reading most of the advertisement, United's ad ranked second, being exceeded by only one other ad which was a full color poster type ad.

FROM HERE TO THERE

AND EVERYWHERE!

The Great Silver Fleet Serves You Best . . .

80-Minute Flights Between Washington and New York (Newark Airport)

Operating 5,328 miles of air passenger, air mail and air express routes, Eastern Air Lines serves 43 cities in 16 states. Having flown more than 300 million passenger miles, Eastern Air Lines has attained a most distinctive record. It is the only major air transport company to have received three consecutive annual awards of The National Safety Council.

EASTERN Airlines

MEMBER OF THE NATIONAL SAFETY COUNCIL

WAE Reorganization

Reorganization of the operations dept. of Western Air Express has been announced by C. N. James, v.p., operations. Chief Pilot Fred W. Kelly was named flight supt. with jurisdiction over all flight movements and pilot training. E. N. Whitney, supt. of communications, henceforth will be known as supervising dispatcher with offices in Burbank. In a similar capacity at Salt Lake City will be E. J. Seeley with jurisdiction over flight movements from Las Vegas to Great Falls, Mont. His staff includes E. L. Anderson, formerly of Butte; B. B. Caspellano, Frank Eastman and C. F. Soper.

Lupton Leaves Braniff

George W. Lupton, Jr., who became general counsel for Braniff Airways some months ago, has severed his connection with the company and is now associated with the law firm of Haight, Trippett & Syvertson in Los Angeles.

P. O. Restores Holding Orders

The Post Office Dept., which several weeks ago temporarily suspended the transcontinental airlines' holding orders, has notified the carriers that they may hold for mail from connecting lines. The companies have been warned, however, not to hold if subsequent connections along their routes will be disrupted.

American Resumes Non-Stop

American Airlines was to resume on June 1 its non-stop Washington-Chicago service which it abandoned last year. Recently the evening westbound plane has been stopping at Cincinnati. Two additional New York-Chicago schedules were to be inaugurated also.

'Circle Tour' Promotion

General advertising copy of Western Air Express is featuring the "circle tour" idea, suggesting that tourists "see the San Francisco fair plus Southern California and Boulder Dam

VANISHED AMERICAN



He used to plan his day's work according to how far a horse and buggy could go in a day. Then came rail travel, then the auto. Today, the whole nation is his province for the day's work. By Flagship, it's only overnight from coast to coast, and proportionately less in between! An American has vanished. Another takes his place, whose daily work, if need be, finds him closing a desk in New York at night to go and see a customer in Los Angeles in the morning. Nothing has so expanded the day's work in America as air transportation!

AMERICAN AIRLINES Inc.

ROUTE OF THE FLAGSHIPS

Representatives at Braniff Session



Traffic representatives of Braniff Airways convened recently in Dallas for a three-day spring sales convention under the direction of Charles E. Beard, vice-president, and Bill Beattie, his assistant. T. E. Braniff, president, presented his "president's trophy," shown above, which will go monthly to the traffic office having the best sales record. First recipient was Douglass Wood, Dallas d.t.m.

Representatives of other lines attended the meeting as guests of Braniff. They were Porter Norris, Houston, PAA; Laigh C. Parker, Monroe, La., Delta; M. D. Miller, Chicago, American; and Bill Austin, Kansas City, TWA. Discussion leaders were C. G. Adams, secy-treas.; Reagan Stunkel, maintenance superintendent; L. H. Luckey, operations manager; Willie Peck, chief hostess, and Loyd Eden, chief ticket auditor.

Shown in the picture, left to right, standing—Gail Urban, Chicago d.t.m.; W. F. McPhail, KC d.t.m.; James Shelby, Ft. Worth d.t.m.; Al Aldridge, Houston I.t.m.; Gordon Shook, San Antonio d.t.m.; Elmer Orndorf, Corpus Christi city traffic mgr.; Bill Key, Jr., Wichita city traffic mgr.; Russell Rau, Houston traffic representative. Seated—Bob Hedberg, Oklahoma City d.t.m.; Douglass Wood, Dallas d.t.m.; Bill Beattie; Charles E. Beard; John Cook, Oklahoma City; Jack Daugherty, Brownsville d.t.m.; Bob Burck, Jr., Austin.

at no extra cost." Patrons may "go one way and return the other, with liberal stopover privileges. And the price is exactly the same as a single round-trip ticket."

Aviation Promotion Lags Behind Technical Advances, Smith Says

Sales promotion efforts of the airlines are not keeping up with technical advances made in the industry mainly because of airline management's shortsightedness, according to C. R. Smith, president of American Airlines.

Addressing the Insurance Advertising Conference in New York on May 16, Smith characterized airline management as so hidebound by technical consideration that its thinking stops short of success in promotion matters.

"To date, the technicians in air transportation have done a much better job than sales and advertising men," Smith stated. "We know much more today about how we should operate an airline than we know about how we should sell the product we manufacture, air transportation.

"The first and most important sale that any advertising man has to make is an internal one, in his own company. Some of our advertising friends often tell us that selling the public is a 'pushover' when compared with the job of selling the management and the board of directors."

Smith told the meeting that the most important job of aviation promotion is to get people to make their first flight. He disputed the statement that men do not fly because their wives object. "Men are often more difficult to sell on air transportation than are the women," he stated. "Consider the multiplicity of new things that have been adopted by the women in the home. Compare that with the number of new things that have been adopted by men in their office. A salesman or an advertisement cannot argue a man out of habits, fear or prejudice. There is only one way to overcome inhibitions about air travel and that is to get people into a modern air transport airplane for their first trip."

In his opinion, there is no saturation point for air travel, Smith said. "The market is as large as the present market that now uses Pullmans—and much larger," he stated.

Airlines Established All-Time Records in 1938, CAA States

All-time records for number of miles flown and passengers and express carried were established by American-operated scheduled air carriers in 1938, according to the final reports received by the CAA from domestic, territorial and foreign operators.

Revenue miles flown in 1938 were 81,058,127, an increase of 5% over the 1937 total of 77,403,365, while passengers increased 21% from 1,267,580 to 1,536,111. Express pounds were up 5.22%, from 8,984,049 to 9,452,600.

The domestic airlines' revenue passengers increased 22.78% in 1938, when 1,176,858 were carried against 958,510 in 1937, and revenue passenger-miles rose 16.97% from 407,295,893 to 476,402,280. There were 345 airplanes in operation on the scheduled airlines at the end of the year, and these aircraft consumed 45,310,192 gallons of gasoline and 829,870 gallons of oil during 1938.

Employment was furnished by the air carriers for 13,309 persons as of Dec. 31, compared with 11,546 in 1937, the CAA stated. The 1938 employment was divided as follows: pilots, 820; co-pilots, 605; stewardesses, 310; stewards, 141; dispatchers, 187; mechanics and riggers, 3,415; other hangar and field employees, 2,635; office employees, 4,724, and all other employees, 472.

On the domestic lines, 110,840 flights were scheduled, 104,964 were started and 103,939, or 95.36% completed. This is 4/10 of 1% under 1937 when 107,418 were scheduled, 100,595 started and 96,807, or 93.40% completed. Extra sections in 1938 totaled 4,036 against 2,966 in 1937.

Average speed of domestic carriers last year was 153 mph. and the average length of a passenger's trip was 415 miles. Revenue passenger load factor was 50.18%.

TWA Pilot Stars

Former La Verne Brown, pilot, who left the cockpit of a TWA DC-2, is now John Trent, "Tailspin Tommy" of the movies. "Brownie," as he is known to acquaintances, has acquired screen rights to "Tailspin Tommy," and is both producing and starring in cinema versions of Tommy's adventures.



BEHIND THE SCENES

• The average age of United Air Lines' 2,000 employees is only 32 years, yet their average length of service in the company is five years.

• Eight of United's employees have been actively connected with scheduled air transportation since the inception of air mail service twenty-one years ago. One hundred and three of United's personnel have been with the company since the coast-to-coast operation was commenced in 1927. Three hundred and eight employees can claim 10 years of United service, while a total of 934 have been in the company's employ for 5 years.

• Young veterans are these 2,000 people who have built and who operate United Air Lines. Their work bears the seasoned efficiency of long practical experience, yet their energetic youth spurs them forward along constructively progressive lines.

UNITED AIR LINES
THE MAIN LINE AIRWAY

The Douglas DC-4 Gets CAA Approval



The 42-passenger Douglas DC-4, now on a tour of the country by United Air Lines, has received its approved type certificate from the CAA. In photo above are, l. to r. Arthur E. Raymond, vice president and director of engineering of Douglas Aircraft Co., receiving certificate from L. J. Holoubek, CAA inspector, while Grant Mason, CAA member, looks on.

Woolsey Flies and Flies and Flies,

And Then Sits and Sits and Sits

He travels 100,000 miles by air each year; crosses the country coast-to-coast a half dozen times; lives out of a suitcase, not exceeding 40 lbs., for 50 weeks of the year and has no place in the world he can call home. He is W. B. Woolsey, traveling auditor for American Airlines, and he's been doing it for seven years.



Woolsey

A native of Los Angeles and unmarried, Woolsey's job is to cover the 57 cities in which American maintains offices at least twice a year; some of the stations more often. This has resulted in his limiting his wardrobe to clothes that can be carried in one suitcase. These, with the clothes he has on his back, are his only clothes. When replacements are needed he purchases them in whatever city he might be in at the time.

For packing his bag he carries the following items:

One business suit; 1 pair slacks; 1 bathing suit; 1 bathrobe; detachable lining for topcoat; 6 shirts; 3 suits underwear; 12 socks; 12 handkerchiefs; 2 pairs shoes; 10 ties; shaving articles; toothbrush.

Woolsey has traveled with John Dillinger, Margaret Sullivan, Ruth Chatterton, Jean Parker, Miriam Hopkins, Nancy Carroll, Clark Gable, Will Rogers, Wallace Beery and Herbert Marshall.

He considers himself something of an amateur gourmet and offers the following as the best places to buy various types of food:

Best oysters—Boston; seafood—New Orleans; steaks—Ft. Worth; soups—Cincinnati; salads—Los Angeles; chicken—Nashville; desserts—New York.

While he says he has little difficulty in having his mail forwarded about the country, he confesses that half the time he has a stray box of laundry trailing him by about two days.

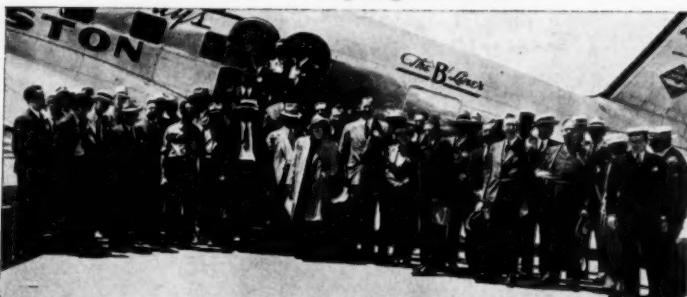
When vacation time rolls around Woolsey goes away to his brother's cabin on the Mohave desert in California. There he just sits and sits and sits.

Does all of this agree with him? When he took the job seven years ago he weighed a puny 165 lbs. Today he spins the scales around to 196.

American in Time

Because its stock is now listed on the New York Stock Exchange (previously on the Curb), "Time" published an extensive article on American Airlines in its May 22 issue. C. R. Smith, president of American, was referred to as "homespun, slangy." Ralph Damon, vice president in charge of operations, was termed "energetic" and Charles Rheinstrom, vice president in charge of sales, was called "high-powered."

Houston's Flying Boosters



Pictured are citizens of Houston, Tex. who recently made the city's first aerial goodwill tour to Brownsville, Corpus Christi, San Antonio, Austin and Waco, a 1,000-mile jaunt, by Braniff Airways. Sponsored by the Houston Chamber of Commerce, the aerial excursionists covered the distance in 12 hours. Among those making the trip were A. S. Aldridge, Haygood Ashburn, Lee Borden, Henry H. Cate, J. W. Fincher, John W. Luker, Lloyd Merwin, T. Fred Robbins, Paul E. Taft, T. P. Wier and Bill Blair.

DC-4 Receives CAA Airworthiness Certificate; Starts Eastern Tour

Douglas Aircraft Co. on May 12, following receipt of an airworthiness certificate from the CAA, began official courtesy flights with the four-engined DC-4, and on May 22 flew the ship from Burbank to Salt Lake City and Cheyenne, the first leg of a trip east.

Block-to-block speed of the Burbank-Cheyenne flight was given as 210 mph. Among those present on the first flight at Los Angeles were G. Grant Mason Jr., CAA member, and L. J. Holoubek, W. Morrison Cline and J. S. Marriott, CAA inspectors. W. A. Patterson, president of United Air Lines, flew from Burbank to Oakland in the ship, while Arthur E. Raymond and Mrs. Raymond made the trip to Cheyenne. Benny Howard was the pilot.

The 60-day schedule of flights over routes of five major airlines will include stops at Denver, Chicago, Cleveland, Newark, Washington and other points. It is expected that the DC-4 will be in Washington June 5-7.

Responsible west coast sources reveal that United Air Lines is expected to purchase at least seven of the planes at a total cost of more than \$3,150,000. Patterson, after conferring with Donald Douglas, president of Douglas, said, "United is more than interested in the DC-4. Within 60 days we shall make our decision. We look with favor on four-engined equipment and our purchase, if made at that time, will involve at least seven DC-4's." Orders placed next July would be filled late in 1940. If ordered in lots of 20 or more, each DC-4 is expected to cost approxi-

mately \$450,000. It also was said on the west coast that TWA will not test the plane.

Development and construction of the DC-4, together with engineering, research and testing, cost approximately \$2,400,000, according to the Douglas company.

The CAA in issuing an airworthiness certificate, stated that the aircraft "does not comply with the landing speed requirements prescribed in section 04.700 of the Civil Air Regulations in that the landing speed of such aircraft is 79 mph. when loaded to the foremost center of gravity." The Authority added, however, that "section 04.003 of the CAR provides for the issuance by the Authority of special rulings with respect to new types of aircraft and new types of construction relaxing the requirements of the CAR which would otherwise be applicable to such aircraft."

Other sections of the CAA order stated that "the landing characteristics of the airplane have been found, in extended trial under the supervision of the CAA's representatives, to be satisfactorily equivalent to those which section 04.700 of the CAR were designed to insure. The landing speed with the center of gravity in its forwardmost position is determined by conditions of control and does not imply any increase in normal speed of approach to a landing above what would normally correspond to a landing speed of 70 mph. The Authority finds that notwithstanding section 04.700 of the CAR, Douglas Aircraft Co. aircraft model DC-4 is in condition for safe operation."

Another Romance



Stewardess Ruth Croman met First Officer Les Williams aboard an American Airlines Flagship. Must have been love at first sight. The marriage took place in Florida Mar. 20 but was kept secret until recently. She is from Marion, O.; he is from Buffalo, N. Y.

ADVERTISING Two New Accounts

Sanger, Richards & Loft have been named to direct the accounts of Radio Aircraft Co. and Capitol Aircraft and Supply Co. both of Brooklyn, N. Y.

National Advertising

United Aircraft Corp., East Hartford Conn., inserted a full page advertisement in "Time" for May 22 announcing the consolidation of the Chance Vought and Sikorsky divisions.

Braniff Advertising

Braniff Airways is placing a series of advertisements in "Time," the first advertising the company has ever placed in a large national magazine. The series may run to 12 insertions, mostly a column and a half. The first ad included a map of the line. Second insertion was entitled "A Fledgling Becomes A Fleet."

Northwest Account

Northwest Airlines Inc. on Apr. 7 announced from St. Paul the appointment of Beaumont & Hohman Inc. Chicago, as its advertising agency effective immediately.

RECORD OF SCHEDULED AIRPORT OPERATIONS

	Week Ended May 13				Week Ended May 20			
	Passengers	Transports	Passengers	Transports	In	Out	In	Out
	In	Out	In	Out	In	Out	In	Out
*Burbank	889	922	942	928
Cleveland	2,009	2,100	242	244	2,051	2,060	251	253
Dallas	1,114	1,140	169	168	1,156	1,229	170	170
**Pittsburgh	1,222	1,283	299	299	1,201	1,341	298	298
+San Francisco	78	77	27	146	197	48	48	48

April Report

	Passengers		Transports		Mail	Express
	In	Out	In	Out		
Chicago	13,880	14,176	1,421	1,442	278,920	160,186

*Figures from Burbank Union Air Terminal show totals for United, TWA and WAB; include no through passengers and revenue passengers only.

**Figures from Allegheny County Municipal Airport show passengers in and out of Pittsburgh; no through passengers tabulated. All American Aviation Inc. mail pickup service inaugurated May 12-2 flights daily, ex. Sunday.

+Construction limits San Francisco field to small transports.

FEB. 19

The Race against Time began Feb. 9. In 8 days six giant dragscoop scrapers ripped out 83,000 cu. yds. of heavy clay for the basement of a new 685-by-340 foot building.

BUILT IN
77 DAYS

to make the

MARTIN

Plant the Largest Unit Aircraft Factory
in the United States

APR. 12

Structural steel work finished, as many as 986 workmen in a single 24-hour day rush completion of the \$1,800,000 addition which brings Martin total floor space to 1,087,000 sq. ft.

APR. 27

Breaking all construction records by occupancy in 11 weeks, this Martin project demonstrates what American initiative, energy and skill can accomplish in putting through a job on an "emergency" basis.

Breaking The World's Speed Record in Construction

MAR. 18

38 days from the starting gun, the reinforced concrete floor is completed and structural steel starts to rise—5 days ahead of schedule—with 7 cranes speeding erection.

APR. 24

With main floor and basement providing 440,000 additional square feet of factory space, the new building makes possible airplane production for national defense at a rate never before equaled.

MARTIN

Builders of Dependable Aircraft Since 1909

AIRCRAFT

The Glenn L. Martin Company, Baltimore, Md., U.S.A.

\$125,000 Order For Harlow Ships Denied

Placing of an order for 24 airplanes with Harlow Aircraft Co., Alhambra, Cal., has been denied by an official of the company which the Securities & Exchange Commission was told had made the purchase. As announced in AMERICAN AVIATION May 1, the Harlow company reported in a registration statement filed with the Commission that it had received an order, its first, with a net billing price of \$125,722.50. The number of planes involved and the purchaser were withheld.

On May 11, after the Commission had denied the Harlow request for confidential treatment of the order data, the material was made public. It was stated that the buyer was Tufts-Edgecumbe Inc., Palwaukee Airport, Wheeling, Ill., and the number of planes was 24. H. S. Darr, in a statement to American Aviation Daily on May 17 wrote: "I noted with great surprise your report of May 12 relative to a supposed order to Harlow Aircraft from Tufts-Edgecumbe Inc., of Palwaukee Airport, Wheeling, Ill., supposedly given by myself as secretary of the purchasing company. I wish to go on record, and would appreciate publication of this fact, that the figures must have been the result of an error if such a report was made to the SEC. I have so advised Harlow Aircraft and the SEC."

\$974,324.75 Army Contract to Seversky

Award of a contract for a service test lot of YP-43 planes to Seversky Aircraft Corp., Farmingdale, L. I., was announced May 23 by the War Dept. Amounting to \$974,324.75, the contract includes necessary spare parts for the planes. The YP-43 is an all-metal, low-wing, single-engine (Pratt & Whitney), single-seater monoplane. It is an improvement on the Seversky P-35 with which several pursuit squadrons of the GHQ are now equipped.

Plane is provided with flaps or air brakes and retractable landing gear and with improvements in streamlining, it is hoped it will reach a speed in excess of 350 mph. Inclosed cockpit is provided with oxygen and other devices to facilitate operation at extreme altitudes.

Pan Am Elects

Paley and Gates

William S. Paley, president of Columbia Broadcasting System, and Artemus L. Gates, president of New York Trust Co., were elected directors of Pan American Airways Corp. at the annual meeting held May 18.

AMERICA'S FIRST AIRCRAFT INSURANCE GROUP

• Comprised of 45 Leading American Companies

UNITED STATES AVIATION UNDERWRITERS

175 West Jackson Blvd
Chicago, Illinois

80 John Street
New York, N. Y.

724 S. Spring Street
Los Angeles, Calif.

TRANSAIR INC. FORMED

San Francisco Capital Backs Manufacturing Co.; 3-Engine Transport Planned

A northern California airplane manufacturing company, to be known as Transair Inc. and formed by San Francisco capital, has taken options on land adjoining Modesto airport where an initial unit plant of approximately 48,000 sq. ft. will be erected shortly. Company plans to introduce a three-engine commercial transport plane, with capacity of from 17 to 20 passengers. Transair will have an authorized capitalization of 600,000 shares of \$3.50 par value common, of which 265,000 will be outstanding.

Officers of the company are F. L. Hewitt, president and treasurer; Lloyd Stearns, vice president; Mrs. Alberta N. Ryan, vice president; James G. Macey, vice president; A. Gambarasi, secretary. Chief engineer will be Walter F. McGinty.

22 Bellancaas Released for Shipment to Mexico

Wilmington, Del., May 16—Sale and shipment of a cargo of 22 Bellanca monoplanes, valued at approximately \$45,000 each, has been sanctioned by the State Dept. The planes have been at the Marine Terminal in crates for over a year and were expected to be loaded on a freighter to be carried to the Mexican government. Bellanca officials refused to comment.

The planes, constructed at Bellanca's New Castle plant, were said to be built for an American firm, agent for foreign purchasers. Representatives of the German Reich protested to the State Dept. that the cargo was to be sent to Loyalist Spain through French channels, and the department did not approve shipment. The planes were thought to be Bellanca 28-90s, low-wing high-speed monoplanes, with a cruising speed of 250 mph. They were not equipped with armaments.

BAM BUYS CONSAIR 28

Monoplane Boat Will Be Delivered by Air in July

Purchase of a Consolidated twin-engine flying boat, model 28, by the British Air Ministry was disclosed following an aviation display in London in connection with Empire Air Day on May 20. Manufactured by Consolidated Aircraft Corp., San Diego, Cal., the 28 is intended for experiments and will be delivered by air in July. The boat is powered by two Pratt & Whitney twin-row Wasp engines, R-1830-SCG, rated at 900 hp. The monoplane has a maximum cruising range of 4,000 mi.

Brewster Stock Outstanding

As of Apr. 29, Brewster Aeronautical Corp. reports 374,107 shares of its \$1-par common stock outstanding.

Eight Lockheed 14s Ordered By 2 Lines

Two orders for eight Lockheed 14 transports, totaling \$680,000, have been announced by the Burbank corporation. Trans-Canada Air Lines placed an order for six of the ships, the first to have been delivered in mid-May and the remaining five in August. Amount of the order, including spare parts and extra equipment, will exceed \$500,000.

For use on Regie Air Africaine airline, two of the 11-passenger ships have been ordered by the French Air Ministry in a contract amounting to approximately \$180,000, including spare parts and equipment. Delivery was to be made within 120 days. Two Pratt & Whitney 850-hp. Hornet engines will power the planes and Hamilton Standard full-feathering hydromatic propellers will be used.

Trans-Canada will have in operation, following delivery of the late order, five Lockheed Electra 10-passenger transports and 15 Lockheed 14s, which will constitute the largest fleet of Lockheed equipment on any airline in the world.

5 BEECHCRAFTS ORDERED

Indian Airline Buys 3 2-Motored Ships; Columbia Firms Signs For 2 Singles

Tata & Sons Ltd. of Bombay, internal airline of India, has placed an order with Beech Aircraft Corp., Wichita, Kan., for three model 18D twin-motored Beechcraft airliners. Tata airways operates 1,965 miles from Karachi to Colombo, 805 miles from Bombay to Delhi and 1,000 miles from Bombay to Trichinopoly.

Capt. Hans Hoffman and Capt. Fritz Herzhauser have completed negotiations for two single-engined Beechcrafts which they will use in their new operations to be based at Bogota, Colombia. The organization will be known as Arco Flying Service, patterned after charter operations of O. J. Whitney Inc., exclusive distributors for Beechcrafts in South America.

No Failures of X-rayed Parts

Following extensive industrial use of X-ray as a method of examining materials and parts to be used in complete airplanes, Lockheed Aircraft Corp. has announced that to date, there have been no failures of an X-rayed part.

Canadian-Colonial on Curb

Effective May 15, 200,000 shares of Canadian Colonial Airways, Inc., \$1-par common stock, were listed on the New York Curb Exchange. The company's authorized capitalization is 250,000 shares. Latest figures show 14,699 stockholders.

Douglas Order

(Continued from page 1)

not yet been assigned.

"The present attack bomber is the result of intensive studies made of the aircraft used in operations in both Spain and China," the official announcement said. "By taking advantage of the lessons learned in these conflicts it has been possible to combine in a single plane the good features of the attack plane, which has been developed primarily by the United States, and of a light fast bomber. In recommending the purchase of this attack bomber, Maj. Gen. Henry H. Arnold, chief of the Air Corps, advised the Acting Secretary of War, 'This plane has a better performance than any comparative airplane in production or in service anywhere in the world today.'"

Planes to be produced under awards to the Martin and Stearman companies are essentially the same as the planes which were entered at Dayton in the attack bombing competition (Stearman X-100 and Martin twin-engine, pictured in AMERICAN AVIATION, Apr. 15), circular proposals for which were opened on Mar. 17.

Regrets

Approximately 250 column inches of aviation financial news already in type was held out of this issue because of lack of space, the size of the magazine being determined by advertising revenue. This financial news will be published in the next issue as space warrants.

Incorporations

Oregon—Dan Lewis Aircraft Inc. Portland. Roscoe C. Nelson, Jr., Richard R. Morris, James C. Dezen-dorf, Manufacturing. Capital stock \$1,000. Filed by Day, Hampson & Nelson, attorneys, Portland.

New York—Tri-Cities Luscombe Airplane Distributors Inc., Binghamton aircraft; Jenkins, Deyo & Hitchcock, Security Mutual Bldg., Binghamton; \$5,000.

Oregon—Salem Flyers Club, Salem. Paul Franklin, John Hughes and Pauline Corning, Amateur flying club. Charitable. Filed by T. W. Allen, Salem.

Indiana—United Aircraft Engine Workers, an independent union of skilled mechanical workers in local factories producing engines & accessories for aircraft. No operations workers of air transport lines are members. Union is entirely local and not affiliated with any other organization. Incorporators are A. B. Cochell, P. A. Williams, William J. Hauser, Harry E. Stuckwisch and George Luetzel.

Kentucky—Frankfort Flying Service Frankfort; capitalized at \$1,000; to give instruction in flying. Incorporators are Albert, Gilbert and Robert Uelchl, Sr.

Delaware—Bellanca Marine & Aircraft Mfg. Inc.; to deal in aircraft of all types; 10,000 shares, no par value. S. L. Mackey, M. L. Wicks, H. Kennedy, Wilmington. (Corporation Service Co.) Not connected with Bellanca Aircraft Corp.



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GOVERNMENT CONTRACTS

(Awards of \$10,000 and Over)
Release Date Shown

AIRCRAFT

Grumman Aircraft Engineering Corp., Bethpage, L. I., N. Y., 5/13, airplanes, \$466,362 (Navy).

Grumman Aircraft Engineering Corp., Bethpage, L. I., N. Y., 5/13, airplanes, \$1,096,476 (Navy).

Chance Vought Aircraft Div., United Aircraft Corp., East Hartford, Conn., 5/13, airplanes, \$2,103,800 (Navy).

*Seversky Aircraft Corp., Farmingdale, L. I., N. Y., 5/23, service test lot of YP-43 planes and spare parts, \$974,324.75 (War).

+Douglas Aircraft Co., Santa Monica, Cal., 5/20, for production of a new design attack bomber, approximately \$15,000,000, including spares (War).

+Glenn L. Martin Co., Baltimore, Md., 5/20, production of attack bomber, approximately \$500,000 (War).

+Stearman Aircraft Co., Wichita, Kan., 5/20, production of attack bomber, approximately \$500,000 (War).

*Complete story on page 28.

+Complete story on page 1.

ENGINES, PARTS, ACCESSORIES

Electric Storage Battery Co., Cleveland, O., 5/13, aircraft storage battery, \$19,063 (War).

Aero Spark Plug Co. Inc., New York, N. Y., 5/13, spark plugs, \$99,983.90 (Navy).

Wright Aeronautical Corp., Paterson, N. J., 5/13, engines, \$20,667.04 (Navy).

Leece-Neville Co., Cleveland, O., 5/13, generator assembly, \$34,440 (War).

Pump Engineering Service Corp., Cleveland, O., 5/13, pump assemblies, \$69,093.50 (War).

Pittsburgh Screw & Bolt Corp., Pittsburgh, Pa., 5/13, blade assemblies, \$51,300 (War).

Weston Electrical Instrument Corp., Newark, N. J., 5/13, indicator assemblies, \$38,199 (War).

United Aircraft Corp., Pratt & Whitney Aircraft Div., East Hartford, Conn., 5/20, engines, \$570,694.61 (Navy).

United Aircraft Corp., Hamilton Standard Propellers Div., East Hartford, Conn., 5/20, propeller assemblies, \$37,144.80 (Navy).

United Aircraft Corp., Hamilton Standard Propellers Div., East Hartford, Conn., 5/20, propeller assemblies, \$3,144.80 (Navy).

Service Tool & Engr. Co., Dayton, O., 5/20, sight assemblies, \$13,775 (War).

United Aircraft Corp., Pratt & Whitney Aircraft Div., 5/18, services & materials, \$28,262.50 (Navy).

Consolidated Aircraft Corp., San Diego, Cal., 5/17, aircraft wings, \$37,395 (Navy).

United Aircraft Corp., Pratt & Whitney Aircraft Div., 5/13, parts for engines, \$28,056.60 (Navy).

B. F. Goodrich Co., Akron, O., 5/9, deicer shoes, \$35,600 (War).

Pioneer Instrument Co. Inc., Bendix, N. J., 5/9, signal assembly, fuel pressure, \$11,200 (War).

Eclipse Aviation Div., Bendix Aviation Corp., Bendix, N. J., 5/22, cartridge starters, \$10,506 (Navy).

Hamilton Standard Propeller Div., United Aircraft Corp., East Hartford, Conn., 5/12, modification and reworking of Hamilton Standard SE50-201 propeller assemblies, \$33,558 (War).

MISCELLANEOUS

Westinghouse Electric & Manufacturing Co., Washington, D. C., 5/19, services to re-rim low-speed gear, \$51,643 (Navy).

Cheney Bros., Manchester, Conn., 5/11, 150,000 yds. parachute silk, \$61,740 (War).

Fairchild Aerial Camera Corp., Jamaica, L. I., N. Y., 5/10, aircraft camera assemblies, \$103,570 (War).

Fleetwings Inc., Bristol, Pa., 5/10, trailers, communication & weather, \$67,365.25 (War).

Sperry Gyroscope Co. Inc., Brooklyn, N. Y., 5/13, anti-aircraft searchlights, \$30,419.26 (War).

General Electric Co., Schenectady, N. Y., 5/13, searchlight units, \$205,400 (War).

Sperry Gyroscope Co. Inc., Brooklyn, N. Y., 5/13, searchlight parts, \$17,439.20 (War).

Goodyear Zeppelin Corp., Akron, O., 5/13, cars & accessory assembly for observation balloons, \$83,179 (War).

Apple Mfg. Co., Dayton, O., 5/20, target assembly, tow, \$94,076.24 (War).

Shell Oil Co. Inc., San Francisco, Cal., 5/22, aviation gasoline, (west), \$130,094 (Navy).

Standard Oil Co. of Cal., San Francisco, Cal., 5/22, aviation gasoline, \$297,385 (Navy).

Union Oil Co. of Cal., Los Angeles, Cal., 5/22, aviation gasoline, \$320,490.05 (Navy).

Shell Oil Co. Inc., New York, N. Y., 5/22, aviation gasoline (east), \$130,952.86.

Socony-Vacuum Oil Co., New York, N. Y., 5/22, aviation gasoline, \$66,556.80 (Navy).

Standard Oil Co. Inc., Louisville, Ky., 5/22, aviation gasoline, \$12,347.50 (Navy).

W. L. Maxson Corp., New York, N. Y., 5/22 navigation tracer, \$3,400 (Navy).

\$200,000 Plant Planned

Los Angeles—Aviation Corporation of California, manufacturers of radio and other aeronautical equipment, has announced plans for the erection of a \$200,000 plant at Los Angeles Municipal Airport. Connected with the company are Vance Breese, Harry V. Reynolds, Henry Powis, Hugo Kirchhofer, I. A. Crooks, J. E. Horner, P. J. Brady and Samuel L. Boukard.

Prop Plant to Move

Lancaster, Pa.—Sensenich Brothers, manufacturers of propellers, plan to move their plant from Kissel Hill to a building being constructed at Lancaster Municipal Airport. For a number of years the firm has manufactured about 70% of propellers used in the U.S. The brothers, Harry and Martin, specialized in the manufacture of the one-blade prop several years ago.

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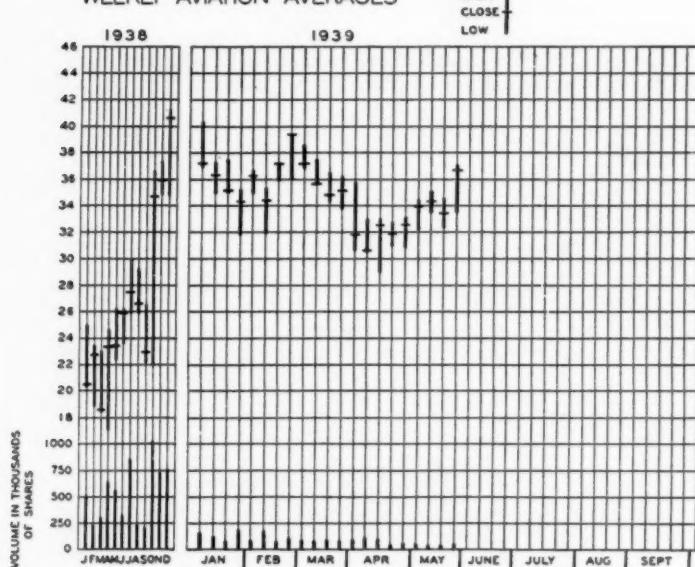
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WEEKLY AVIATION AVERAGES



Aviation Stock Comments
Chart Data Supplied by Wyckoff Associates Inc.,
Comments by Philip P. Friedlander

Has the real move in aviation stocks started?

A sweeping generalization, deriving the quick answer "yes," is very dangerous at this stage. There are too many variables to consider and analyze. Marketwise the action of the leaders of the industry heralds a further spectacular move. The break through to 37 in the averages on expanding volume has all the attributes of a real bull thrust. The news background furnishes excellent ammunition and courts a new buying interest.

The other side of the picture would indicate caution at this particular point. The averages have advanced into new territory and are now under the supply and troubled zone of 38-39. It was from this area late in February this year that the last retreat started. At that time bright things were predicted for the group and the averages made a gallant attempt to break through 41, the highs of 1938.

The failure of that attempt is of no more significance than the fact that

in the middle of April the averages hit into new low grounds of 29.03, and but momentarily hesitated before beginning the new forward march. This in itself is not strange for very often the general market is hit by a tidal wave of selling just before the "big move" starts.

Logically it could be said that certain aviation stocks have made enough gain and that a resting period lies ahead. Others which have failed to join the brigade should enjoy further progress upward. The chances favor that government contract awards will touch off the individual moves.

This move in the average came very quickly and without a large period of preparation. That stage is always necessary. The prospects are that as a group a period of retreat and rally of small significance lies ahead. Weakness should be utilized for further accumulation of this type of equity. Too much bullishness on stocks which have already had a large move is not justified.

NEW YORK STOCK EXCHANGE
Week Ended May 13

	Net			Net			Sales
	High	Low	Change	High	Low	Change	
Aviation Corp.	53 1/4	51 1/4	- 2 1/2	52.00	51 1/2	+ 1/2	3,400
Bendix Aviation	23 1/2	21 1/2	- 2 1/2	20.100	23 1/2	+ 2 1/2	21,700
Boeing Airplane	23 1/2	22	- 1 1/2	6,200	22 1/2	+ 20 1/2	5,200
Consolidated Aircraft	21 1/2	20 1/2	- 1 1/2	1,500	20 1/2	+ 19 1/2	2,900
Continental Motors	2 1/2	2 1/2	- 1/2	3,900	2 1/2	+ 2 1/2	4,200
Curtiss-Wright	6	5 1/2	- 1/2	10,900	5 1/2	+ 5 1/2	12,600
Curtiss-Wright A	26 1/4	25 1/4	- 1 1/4	5,900	25 1/2	+ 2 1/2	9,500
Douglas Aircraft	65	61 1/2	- 3 1/2	9,000	64 1/2	+ 60 1/2	7,500
Eastern Air Lines	14 3/4	13 1/2	- 1 1/2	10,400	14	+ 1 1/2	3,200
Ex-Cell-O	18 1/2	17 1/2	- 1 1/2	1,700	17 1/2	+ 1 1/2	1,900
Glenn L. Martin	36 1/2	35	- 1 1/2	18,800	35 1/2	+ 3 1/2	15,400
Natl. Aviation Corp.	10 1/2	9 1/2	- 1 1/2	1,900	9 1/2	+ 9 1/2	1,100
N. American Aviation	16 1/2	15 1/2	- 1 1/2	14,800	16	+ 1 1/2	14,100
Pan American Airways	11 1/2	10 1/2	- 1 1/2	5,900	12 1/2	+ 11	4,800
Sperry Corp.	43 1/2	42	- 1 1/2	10,300	42 1/2	+ 39 1/2	13,600
Thompson Products	21 1/2	21 1/2	- 1/2	1,000	21 1/2	+ 19 1/2	1,800
TWA	9 1/2	8 1/2	- 1 1/2	2,000	8 1/2	+ 8 1/2	1,800
United Aircraft	38 1/2	37 1/2	- 1 1/2	11,900	37 1/2	+ 35 1/2	11,500
United Air Lines	10 1/2	10	- 1/2	8,300	10 1/2	+ 9 1/2	5,500

NEW YORK CURB EXCHANGE
Week Ended May 13

	Net			Net			Sales
	High	Low	Change	High	Low	Change	
Aero Supply B	4	3 1/2	- 1/2	400	7 1/2	+ 7 1/2	200
Air Associates	7 1/2	7 1/2	+ 1/2	300	7 1/2	+ 7 1/2	300
Air Investors	1 1/2	1 1/2	- 1/2	100	1 1/2	+ 1 1/2	300
American Airlines	26 1/4	24	- 2 1/4	3,300	25	+ 22 1/2	1,900
Aviation & Transp.	2 1/2	2 1/2	- 1/2	1,600	2 1/2	+ 2 1/2	1,700
Beech Aircraft	8	7 1/2	- 1/2	600	7 1/2	+ 7 1/2	800
Bell Aircraft	25 1/2	24	- 1/2	1,100	23 1/2	+ 22	800
Bellanca Aircraft	7	6 1/2	- 1/2	1,000	6 1/2	+ 6 1/2	900
Breeze Corps.	5 1/2	5	- 1/2	10,100	4 1/2	+ 4 1/2	3,100
Brewster Aero	8 1/2	8 1/2	- 1/2	3,100	8 1/2	+ 8 1/2	3,500
Canadian Colonial					5 1/2	+ 5 1/2	1,300
Fairchild Aviation	12 1/2	11	- 1/2	1,700	11 1/2	+ 10 1/2	1,300
Grumman Airc't Eng.	17 1/2	16 1/2	- 1 1/2	2,000	17	+ 15 1/2	1,600
Irving Air Chute	18	17 1/2	- 1 1/2	500	17 1/2	+ 17	800
Lockheed Aircraft	27 1/2	25 1/2	- 1 1/2	11,500	26 1/2	+ 23 1/2	7,700
Penn-Central Airlines	7 1/2	7 1/2	- 1/2	200	6 1/2	+ 6 1/2	200
Roosevelt Field	1 1/2	1 1/2	- 1/2	200	1 1/2	+ 1 1/2	200
Severnsky Aircraft	4	3 1/2	- 1/2	2,800	3 1/2	+ 3 1/2	10,400
Waco Aircraft	4	3 1/2	- 1/2	700	4 1/2	+ 4 1/2	200
Western Air Express	3 1/2	3 1/2	+ 1/2	600	3 1/2	+ 3 1/2	500

Stinson Appoints Osborn and Reisner

Appointment of Robert R. Osborn as chief engineer and Lewis E. Reisner as works manager has been announced by Stinson Aircraft Div. of Aviation Manufacturing Corp.

Mr. Osborn, former chief engineer of Curtiss Aeroplane Div., was responsible for the first successful design of an American plane incorporating wings equipped with slotted leading edges and

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Aero Patents

2,157,122: Warning System for Indicating the Proximity of Aircraft. Issued to Francis W. Dunmore, Washington, D. C., assignor to the government of the U. S. as represented by the Secy. of Commerce.

2,157,504: Parachute Harness. Issued to Floyd Smith, Buffalo, N. Y., assignor to Irving Air Chute Co., Inc., Buffalo.

2,157,505: Parachute Pack. Issued to Floyd Smith, Buffalo, N. Y., assignor to Irving Air Chute Co., Inc., Buffalo.

2,157,506: Design for a Symmetrically Sectioned, All-Wing Cantilever Monoplane. Issued to James G. Taylor, Fairfield, and Oscar A. Swanson, Dayton, O., assignors to the U. S. government, as represented by the Secy. of War, and his successors in office. Term of 7 years.

2,158,270: Controllable Cowling. Issued to Kenneth A. Browne, Westwood, N. J., assignor to Wright Aeronautical Corp., Paterson, N. J.

2,158,273: Rocker Arm Bearing. Issued to Roland Chilton, Ridgewood, N. J., assignor, by mesne assignments, to Wright Aeronautical Corp., Paterson, N. J.

2,158,300: Retractable Landing Gear. Issued to George A. Page, Jr., Ferguson, Mo., assignor, by mesne assignments, to Curtiss-Wright Corp.

2,158,377: Glider. Issued to Anthony P. O'Hare, West New Brighton, N. Y.

2,158,398: Aircraft Construction. Issued to Michael Watter, Baltimore, Md., assignor to Glenn L. Martin Co., Baltimore.

2,158,686: Airfoil Construction. Issued to George E. Barnhart, Pasadena, Cal.

2,158,731: Parachute Braking Means. Issued to William B. Schmidt, Chicago, Ill.

2,158,858: Power Plant Apparatus for Aircraft. Issued to Bruno Hoffmann, Berlin-Spandau, Germany, assignor to General Electric Co.

2,159,727: Design for an Airplane. Issued to Berthoud C. Boulton, Towson, and Lewis C. McCarty, Jr., Baltimore.

2,159,731: Sound Locator Receiver. Issued to Frank R. House, Baldwin Harbor, N. Y., assignor to Sperry Gyroscope Co. Inc., Brooklyn, N. Y.

2,159,482: System of Locating Aircraft at Night. Issued to Frank R. House, Baldwin Harbor, N. Y., assignor to Sperry Gyroscope Co. Inc., Brooklyn, N. Y.

2,159,703: Rate of Climb Indicator. Issued to Paul W. Koch, Brooklyn, N. Y., assignor to Bendix Aviation Corp., South Bend Ind.

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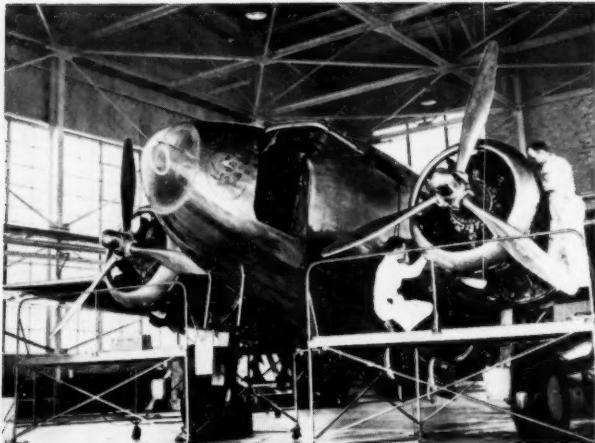
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on the occasion of their visit

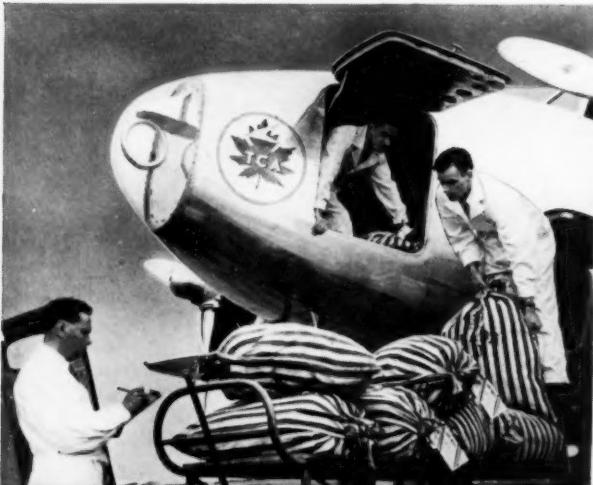
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Trans-Canada adds to its Lockheed Fleet

On April 1, 1939, Trans-Canada Air Lines added a daily passenger schedule to its established airmail service from Montreal to Vancouver. Within a few weeks six more luxurious Lockheed 14 transports were ordered. This will bring Trans-Canada's total Lockheed fleet to twenty.

An Act of Parliament created Trans-Canada Air Lines. Long research, scientific planning, adoption of the most modern air transportation methods and careful selection of personnel have made it one of the World's finest.

Trans-Canada was equally thoroughgoing in its choice of all equipment. And Lockheed Aircraft Corporation takes pride in the part played by Lockheed transports in pioneering this newest and fastest of transcontinental routes.

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